

Table of Contents

Section A: Executive Orders And Public Laws

| Section | Title |
|---------|--|
| A-1 | Executive Order 12969, Federal Acquisition and Community Right-to-Know (8 Aug 95) |
| A-2 | Executive Order 12902, Energy Efficiency and Water Conservation at Federal Facilities (8 Mar 94) |
| A-3 | Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (11 Feb 94) |
| A-4 | Executive Order 12873, Federal Acquisition, Recycling, and Waste Prevention (20 Oct 93) |
| A-5 | Executive Order 12856, Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements (3 Aug 93) |
| A-6 | Executive Order 12843, Procurement Requirements and Policies for Federal Agencies for Ozone-Depleting (22 Apr 93) |
| A-7 | Public Law 101-508 - Nov. 5, 1990, Omnibus Budget Reconciliation Act of 1990 (Pollution Prevention Act of 1990) |

Section B: Air Force Instructions And Policy Directives

| Section | Title |
|---------|---|
| B-1 | Air Force Policy Directive 32-70, Environmental Quality (20 Jul 94) |
| B-2 | Air Force Instruction 32-1053, Pest Management Program (18 May 94) |
| B-3 | Air Force Instruction 32-7042, Solid and Hazardous Waste Compliance (12 May 94) |
| B-4 | Air Force Instruction 32-7080, Pollution Prevention Program (12 May 94) |
| B-5 | Air Force Instruction 32-7001, Environmental Budgeting (9 May 94) |
| B-6 | Air Force Instruction 32-7005, Environmental Protection Committees (25 Feb 94) |

Table of Contents (Continued)

Section C: Memoranda

| Section | Title |
|---------|--|
| C-1 | Memorandum on FY96 Report - DoD Pest Management Measures of Merit (19 Sep 96) |
| C-2 | Memorandum on Halon 1301 and Halon 1211 Guidance (14 May 96) |
| C-3 | Memorandum on Turn-In and Requisitioning Procedures for the Defense Reserve (7 Mar 96) |
| C-4 | Memorandum on Pollution Prevention (P2) Contract Execution (15 Nov 95) |
| C-5 | Memorandum on Pollution Prevention, Refrigerant, and Halon Management Plans (1 Nov 95) |
| C-6 | Memorandum on Reduction in Pesticide Use (11 Aug 95) |
| C-7 | Memorandum on Environmentally and Economically Beneficial Landscaping Practices (29 Jun 95) |
| C-8 | Memorandum on Air Force Pollution Prevention Strategy (24 Jun 95) |
| C-9 | Memorandum on Environmental Security Program Measures of Merit (16 May 95) |
| C-10 | Memorandum on Air Force Guidance for Toxic Release Inventory (TRI) Reporting (10 Apr 95) |
| C-11 | Memorandum on Pollution Prevention on Air Force Acquisition Programs (23 Aug 94) |
| C-12 | Memorandum on Ozone Depleting Chemical (ODC) Interim Waiver Application, Approval Procedures, and Reporting Requirements (14 Jul 93) |
| C-13 | Memorandum on Air Force Ban on Purchases of Ozone Depleting Chemicals (ODCs) - Action Memorandum (7 Jan 93) |

Table of Contents (Continued)

Section D: Miscellaneous Guidance

| Section | Title |
|---------|--|
| D-1 | Department of Defense Instruction 4715.4, Pollution Prevention (18 Jun 96) |
| D-2 | ACC Pollution Prevention Goals (14 Jun 96) |
| D-3 | Department of Defense Instruction 4150.7, DoD Pest Management Program (22 Apr 96) |
| D-4 | Frequently Asked Questions Concerning the DoD Pest Management Measures of Merit |
| D-5 | ACC Earth Day Organizer's Guide (14 Mar 96) |
| D-6 | Pollution Prevention (P2) Program Manager's Checklist (21 Dec 95) |
| D-7 | U.S. Air Force Installation Pollution Prevention Program Guide (Aug 95) |
| D-8 | Commander's Guide to Environmental Quality (Jul 95) |
| D-9 | Recycling, Waste Prevention and Acquisition Benefit the National Environment: The Department of Defense Affirmative Procurement Program (Jul 95) |
| D-10 | Air Force Resource Recovery and Recycling Program Guide (May 1995) |
| D-11 | Air Combat Command Solid Waste Program Management Guidance (1 Oct 94) |

Cross-References By Topic

| For information on: | Consult item entitled: | Section: |
|--|---|-----------------|
| Earth Day | ACC Earth Day Organizer's Guide | D-5 |
| Environmental Compliance and Analysis Services (ECAS) | Memorandum on Pollution Prevention (P2) Contract Execution | C-4 |
| Energy Efficiency | Executive Order 12902, Energy Efficiency and Water Conservation at Federal Facilities | A-2 |
| Environmental Budgeting | Air Force Instruction 32-7001, Environmental Budgeting | B-5 |
| Environmental Protection/Quality/Security/Justice | Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations | A-3 |
| | Air Force Policy Directive 32-70, Environmental Quality | B-1 |
| | Air Force Instruction 32-7005, Environmental Protection Committees | B-6 |
| | Memorandum on Environmental Security Program Measures of Merit | C-9 |
| | Commander's Guide to Environmental Quality | D-8 |
| Federal Procurement/ Acquisition | Executive Order 12969, Federal Acquisition and Community Right-to-Know | A-1 |
| | Executive Order 12873, Federal Acquisition, Recycling, and Waste Prevention | A-4 |
| | Executive Order 12843, Procurement Requirements and Policies for Federal Agencies for Ozone-Depleting | A-6 |
| | Memorandum on Pollution Prevention on Air Force Acquisition Programs | C-11 |
| | Recycling, Waste Prevention and Acquisition Benefit the National Environment: The Department of Defense Affirmative Procurement Program | D-9 |

| | | |
|-----------------------------|--|------|
| Halon Management | Memorandum on Halon 1301 and Halon 1211 Guidance | C-2 |
| | Memorandum on Pollution Prevention, Refrigerant, and Halon Management Plans | C-5 |
| Landscaping | Memorandum on Environmentally and Economically Beneficial Landscaping Practices | C-7 |
| ODS | Executive Order 12843, Procurement Requirements and Policies for Federal Agencies for Ozone-Depleting | A-6 |
| | Memorandum on Turn-In and Requisitioning Procedures for the Defense Reserve | C-3 |
| | Memorandum on Ozone Depleting Chemical (ODC) Interim Waiver Application, Approval Procedures, and Reporting Requirements | C-12 |
| | Memorandum on Air Force Ban on Purchases of Ozone Depleting Chemicals (ODCs) - Action Memorandum | C-13 |
| Pest Management | Air Force Instruction 32-1053, Pest Management Program | B-2 |
| | Memorandum on FY96 Report - DoD Pest Management Measures of Merit | C-1 |
| | Memorandum on Reduction in Pesticide Use | C-6 |
| | Department of Defense Instruction 4150.7, DoD Pest Management Program | D-3 |
| | Frequently Asked Questions Concerning the DoD Pest Management Measures of Merit | D-4 |
| Pollution Prevention | Executive Order 12856, Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements | A-5 |
| | Public Law 101-508, Omnibus Budget Reconciliation Act of 1990 (Pollution Prevention Act of 1990) | A-7 |
| | Air Force Instruction 32-7080, Pollution Prevention Program | B-4 |
| | Memorandum on Pollution Prevention (P2) Contract Execution | C-4 |

| | | |
|---|---|------|
| Pollution Prevention (continued) | Memorandum on Pollution Prevention, Refrigerant, and Halon Management Plans | C-5 |
| | Memorandum on Air Force Pollution Prevention Strategy | C-8 |
| | Memorandum on Pollution Prevention on Air Force Acquisition Programs | C-11 |
| | Department of Defense Instruction 4715.4, Pollution Prevention | D-1 |
| | ACC Pollution Prevention Goals | D-2 |
| | Pollution Prevention (P2) Program Manager's Checklist | D-6 |
| | U.S. Air Force Installation Pollution Prevention Program Guide | D-7 |
| Recycling | Executive Order 12873, Federal Acquisition, Recycling, and Waste Prevention | A-4 |
| | Recycling, Waste Prevention and Acquisition Benefit the National Environment: The Department of Defense Affirmative Procurement Program | D-9 |
| | Air Force Resource Recovery and Recycling Program Guide | D-10 |
| Refrigerant Management | Memorandum on Pollution Prevention, Refrigerant, and Halon Management Plans | C-5 |
| Right-to-Know | Executive Order 12969, Federal Acquisition and Community Right-to-Know | A-1 |
| | Executive Order 12856, Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements | A-5 |
| Solid and Hazardous Waste | Air Force Instruction 32-7042, Solid and Hazardous Waste Compliance | B-3 |
| | Air Combat Command Solid Waste Program Management Guidance | D-11 |

| | | |
|--------------------------------|---|------|
| Toxic Release Inventory | Executive Order 12969, Federal Acquisition and Community Right-to-Know | A-1 |
| | Memorandum on Air Force Guidance for Toxic Release Inventory (TRI) Reporting | C-10 |
| Waste Prevention | Executive Order 12873, Federal Acquisition, Recycling, and Waste Prevention | A-4 |
| | Recycling, Waste Prevention and Acquisition Benefit the National Environment: The Department of Defense Affirmative Procurement Program | D-9 |
| Water Conservation | Executive Order 12902, Energy Efficiency and Water Conservation at Federal Facilities | A-2 |

Executive Order 12969

Federal Acquisition and Community Right-To-Know

The Emergency Planning and Community Right-to-Know Act of 1986 (42 U.S.C. 11001-11050) (“EPCRA”) and the Pollution Prevention Act of 1990 (42 U.S.C. 13101-13109) (“PPA”) established programs to protect public health and the environment by providing the public with important information on the toxic chemicals being released into the air, land, and water in their communities by manufacturing facilities.

The Toxics Release Inventory (“TRI”) established pursuant to section 313(j) of EPCRA, 42 U.S.C. 11023(j), based on information required to be reported under section 313 of EPCRA and section 6607 of PPA, 42 U.S.C. 13106, provides the public, industry, and Federal, State, and local governments with a basic tool for making risk-based decisions about management and control of toxic chemicals, that can have significant adverse effects on human health and the environment. TRI data allow the public, industry, and government to gauge the progress of industry and government efforts to reduce toxic chemical wastes.

Sharing vital TRI information with the public has provided a strong incentive for reduction in the generation, and, ultimately, release into the environment, of toxic chemicals. Since the inception of the TRI program, reported releases to the environment under TRI have decreased significantly.

The efficiency of the Federal Government is served when it purchases high quality supplies and services that have been produced with a minimum impact on the public health and environment of communities surrounding government contractors. Savings associated with reduced raw materials usage, reduced use of costly, inefficient end-of-pipeline pollution controls, and reduced liability and remediation costs from worker and community claims all serve to increase the economic and efficient provision of essential supplies and services to the government. As a result of TRI reporting, many manufacturers have learned of previously unrecognized significant efficiencies and cost savings in their production processes.

The Federal Government's receipt of timely and quality supplies and services is also served by the general enhancement of relations between government contractors and the communities in which they are situated, as well as the cooperative working relationship between employers and employees who may be subject to exposure to toxic materials.

Information concerning chemical release and transfer can assist the government to purchase efficiently produced, lower cost, and higher quality supplies and services that also have a minimum adverse impact on community health and the environment.

NOW, THEREFORE, to promote economy and efficiency in government procurement of supplies and services, and by the authority vested in me as President by the Constitution and the laws of the United States of America, including EPCRA, 42 U.S.C. 11001 et seq., PPA,

42 U.S.C. 13101 et seq., 40 U.S.C. 471 and 486(a), and 3 U.S.C. 301, it is hereby ordered as follows:

Section 1. Policy.

It is the policy of the executive branch in procuring supplies and services that, to ensure the economical and efficient procurement of Federal Government contracts, Federal agencies, to the greatest extent practicable, shall contract with companies that report in a public manner on toxic chemicals released to the environment.

Sec. 2. Definitions.

2-201. All definitions found in EPCRA and PPA and implementing regulations are incorporated into this order by reference, with the following exceptions for purposes of this order.

2-202. "Federal agency" means an "Executive agency," as defined in 5 U.S.C. 105. For purposes of this order, military departments, as defined in 5 U.S.C. 102, are covered under the auspices of the Department of Defense.

2-203. "Acquisition" means the acquiring by contract with appropriated funds of supplies or services (including construction) by and for the use of the Federal Government through purchase or lease, whether the supplies or services are already in existence or must be created, developed, demonstrated, and evaluated. Acquisition begins at the point when the Federal department or agency needs are established and includes the description of requirements to satisfy agency needs, solicitation and selection of sources, award of contracts, contract financing, contract performance, contract administration, and those technical and management functions directly related to the process of fulfilling agency needs by contract.

2-204. "Toxic chemical" means a substance on the list described in section 313(c) of EPCRA, 42 U.S.C. 11023(c), as it exists on the effective date of this order.

2-205. "Administrator" means the Administrator of the United States Environmental Protection Agency ("EPA").

2-206. "Federal contractor" means an entity that has submitted the successful bid or proposal in response to a competitive acquisition solicitation.

Sec. 3. Applicability.

3-301. Each Federal agency shall, to the maximum extent practicable, include in contract solicitations as an eligibility criterion for the award of competitive acquisition contracts expected to equal or exceed \$100,000 with the Federal contractors described in subsection 3-302, the requirement that such contractors must file (and continue to file for the life of the contract) a

Toxic Chemical Release Form (“Form R”), as described in sections 313(a) and (g) of EPCRA, 42 U.S.C. 11023(a) and (g), for each toxic chemical manufactured, processed, or otherwise used by the Federal contractor at a facility, as described in section 313 of EPCRA, 42 U.S.C. 11023, and section 6607 of PPA, 42 U.S.C. 13106.

3-302. The Federal contractors subject to the eligibility criterion described in subsection 3-301 above are those who currently report to the TRI pursuant to section 313(b)(1)(A) of EPCRA, 42 U.S.C. 11023(b)(1)(A), that is, manufacturers having Standard Industrial Classification Code (“SIC”) designations of 20 through 39 (as in effect on July 1, 1985).

3-303. Each Federal agency shall find that a prospective Federal contractor has satisfied the requirement in subsection 3-301 if the contractor certifies in a solicitation that it:

(a) Does not manufacture, process, or otherwise use any toxic chemicals listed under section 313(c) of EPCRA, 42 U.S.C. 11023(c);

(b) Does not have 10 or more full-time employees as specified in section 313(b)(1)(A) of EPCRA, 42 U.S.C. 11023(b)(1)(A);

(c) Does not meet the reporting thresholds established under section 313(f) of the EPCRA, 42 U.S.C. 11023(f); or

(d) Has complied fully with the reporting requirements of subsection 4-404.

3-304. Each Federal agency shall require the filings described in subsection 3-301 above to include information on all chemicals identified by the Administrator pursuant to section 313(c) of EPCRA, 42 U.S.C. 11023(c), as of the date of this order.

3-305. Each Federal agency may amend existing contracts, to the extent permitted by law and where practicable, to require the reporting of information specified in subsection 3-301 above.

3-306. As consistent with Title IV of the Federal Acquisition Streamlining Act of 1994 (FASA), Public Law 103-355, and section 4(11) of the Office of Federal Procurement Policy Act, 41 U.S.C. 403(11), the requirements of this order are only applicable to competitive acquisition contracts expected to equal or exceed \$100,000.

Sec. 4. Implementation.

4-401. Not later than September 30, 1995, the EPA shall publish in the Federal Register guidance for compliance with this order, including applicability with respect to subcontractors.

4-402. Within 30 days of the issuance of the guidance provided for in subsection 4-401 above, each Federal agency shall include in all acquisition solicitations issued on or after the effective date of this order, the provisions necessary to effect this order.

4-403. For all contracts expected to exceed \$500,000, each Federal agency shall consult with the Administrator or the Administrator's designee when the agency believes it is not practicable to include the eligibility requirement of section 3-301 in the contract solicitation or award.

4-404. Each Federal agency shall require each Federal contractor designated in subsection 3-302 above to:

(a) Have included in its response to the contract solicitation a certification, as specified in the guidelines published pursuant to subsection 4-401 of this order, that it will (if awarded the contract) comply with the requirements of subsection 3-301; and

(b) File with the Administrator and each appropriate State pursuant to section 313(a) of EPCRA, 42 U.S.C. 11023(a), the information required by subsection 3-301, beginning on the next July 1 after the date on which the contract is awarded.

4-405. Information submitted to the EPA pursuant to subsection 4-404(b) above shall be subject to the trade secret protections provided by section 322 of EPCRA, 42 U.S.C. 11042. Information that is not trade secret shall be made available to the public pursuant to sections 313(h) and (j) of EPCRA, 42 U.S.C. 11023(h) and (j). The Administrator is directed to review reports submitted pursuant to this order to determine the appropriateness of any claims for trade secret protection.

4-406. When the Administrator determines that a Federal contractor has not filed the necessary forms or complete information as required by subsection 3-301 above, the Administrator or the Administrator's designee may recommend termination of the contract for convenience. The Administrator shall transmit that recommendation to the head of the contracting agency, and that agency shall consider the recommendation and determine whether to terminate the contract. In carrying out this responsibility, the Administrator may investigate any subject Federal contractor to determine the adequacy of compliance with the provisions of this order and the Administrator's designee may hold such hearings, public or private, as the Administrator deems advisable to assist in the Administrator's determination of compliance.

4-407. Each contracting agency shall cooperate with the Administrator and provide such information and assistance as the Administrator may require in the performance of the Administrator's functions under this order.

4-408. Upon request and to the extent practicable, the Administrator shall provide technical advice and assistance to Federal agencies in order to assist in full compliance with this order.

Sec 5. General Provisions.

5-501. The requirements of this order shall be implemented and incorporated in acquisition regulations, including the Federal Acquisition Regulations (FAR), within 90 days after the effective date of this order.

5-502. This order is not intended, and should not be construed, to create any right or benefit, substantive or procedural, enforceable at law by a party against the United States, its agencies, its officers, or its employees. This order is not intended, however, to preclude judicial review of final agency decisions in accordance with the Administrative Procedure Act, 5 U.S.C. 701 et seq.

5-503. This order shall be effective immediately and shall continue to be in effect until revoked.

/s/ WILLIAM J. CLINTON
THE WHITE HOUSE
August 8, 1995

Executive Order 12902

Energy Efficiency and Water Conservation at Federal Facilities

By the authority vested in me as President by the Constitution and the laws of the United States of America, including the Energy Policy and Conservation Act (Public Law 94-163, 89 Stat. 871, 42 U.S.C. 6201 et seq.) as amended by the Energy Policy Act of 1992 (Public Law 102-486, 106 Stat. 2776) and section 301 of title 3, United States Code, I hereby order as follows:

PART 1--DEFINITIONS

For the purposes of this order:

Section 101. The "Act" means the Federal energy management provisions of the Energy Policy and Conservation Act, as amended by the Energy Policy Act of 1992.

Sec. 102. The term "comprehensive facility audit" means a survey of a building or facility that provides sufficiently detailed information to allow an agency to enter into energy or water savings performance contracts or to invite inspection and bids by private upgrade specialists for direct agency-funded energy or water efficiency investments. It shall include information such as the following:

- (a) the type, size, energy use, and performance of the major energy using systems and their interaction with the building envelope, the climate and weather influences, usage patterns, and related environmental concerns;
- (b) appropriate energy and water conservation maintenance and operating procedures;
- (c) recommendations for the acquisition and installation of energy conservation measures, including solar and other renewable energy and water conservation measures; and
- (d) a strategy to implement the recommendations.

Sec. 103. The term "cost-effective" means providing a payback period of less than 10 years, as determined by using the methods and procedures developed pursuant to 42 U.S.C. 8254 and 10 CFR 436.

Sec. 104. The term "demand side management" refers to utility-sponsored programs that increase energy efficiency and water conservation or the management of demand. The term includes load management techniques.

Sec. 105. The term "energy savings performance contracts" means contracts that provide for the performance of services for the audit, design, acquisition, installation, testing,

operation, and, where appropriate, maintenance and repair, of an identified energy or water conservation measure or series of measures at one or more locations.

Sec. 106. The term "agency" means an executive agency as defined in 5 U.S.C. 105. For the purpose of this order, military departments, as defined in 5 U.S.C. 102, are covered under the auspices of the Department of Defense.

Sec. 107. The term "Federal building" means any individual building, structure, or part thereof, including the associated energy or water-consuming support systems, which is constructed, renovated, or purchased in whole or in part for use by the Federal Government and which consumes energy or water. In any provision of this order, the term "Federal building" shall also include any building leased in whole or in part for use by the Federal Government where the term of the lease exceeds 5 years and the lease does not prohibit implementation of the provision in question.

Sec. 108. The term "Federal facility" means any building or collection of buildings, grounds, or structure, as well as any fixture or part thereof, which is owned by the United States or any Federal agency or which is held by the United States or any Federal agency under a lease-acquisition agreement under which the United States or a Federal agency will receive fee simple title under the terms of such agreement without further negotiation. In any provision of this order, the term "Federal facility" shall also include any building leased in whole or in part for use by the Federal Government where the term of the lease exceeds 5 years and the lease does not prohibit implementation of the provision in question.

Sec. 109. The term "franchising" means that an agency would provide the services of its employees to other agencies on a reimbursable basis.

Sec. 110. The term "gainsharing" refers to incentive systems that allocate some portion of savings resulting from gains in productivity to the workers who produce those gains.

Sec. 111. The term "industrial facilities" means any fixed equipment, building, or complex for the production of goods that uses large amounts of capital equipment in connection with, or as part of, any process or system, and within which the majority of energy use is not devoted to the heating, cooling, lighting, ventilation, or to service the hot water energy load requirements of the building.

Sec. 112. The term "life cycle cost" refers to life cycle cost calculated pursuant to the methodology established by 10 CFR 436.11.

Sec. 113. The term "prioritization survey" means a rapid assessment that will be used by an agency to identify those facilities with the highest priority projects based on the degree of cost effectiveness and to schedule comprehensive facility audits prior to project implementation. The prioritization survey shall include information such as the following:

- (a) the type, size, energy and water use levels of the major energy and water using systems in place at the facility; and
- (b) the need, if any, for acquisition and installation of cost-effective energy and water conservation measures, including solar and other renewable energy resource measures.

Sec. 114. The term “shared energy savings contract” refers to a contract under which the contractor incurs the cost of implementing energy savings measures (including, but not limited to, performing the audit, designing the project, acquiring and installing equipment, training personnel, and operating and maintaining equipment) and in exchange for providing these services, the contractor gains a share of any energy cost savings directly resulting from implementation of such measures during the term of the contract.

Sec. 115. The term “solar and other renewable energy sources” includes, but is not limited to, agriculture and urban waste, geothermal energy, solar energy, and wind energy.

Sec. 116. The term “utility” means any person, State, or agency that is engaged in the business of producing or selling electricity or engaged in the local distribution of natural gas or water to any ultimate consumer.

PART 2--INTERAGENCY COORDINATION

Sec. 201. Interagency Coordination. The Department of Energy (“DOE”) shall take the lead in implementing this order through the Federal Energy Management Program (“FEMP”). The Interagency Energy Policy Committee (“656 Committee”) and the Interagency Energy Management Task Force (“Task Force”) shall serve as forums to coordinate issues involved in implementing energy efficiency, water conservation, and solar and other renewable energy in the Federal sector.

PART 3--AGENCY GOALS AND REPORTING REQUIREMENTS FOR ENERGY AND WATER EFFICIENCY IN FEDERAL FACILITIES

Sec. 301. Energy Consumption Reduction Goals. (a) Each agency shall develop and implement a program with the intent of reducing energy consumption by 30 percent by the year 2005, based on energy consumption per-gross-square-foot of its buildings in use, to the extent that these measures are cost-effective. The 30 percent reductions shall be measured relative to the agency’s 1985 energy use. Each agency’s implementation program shall be designed to speed the introduction of cost-effective, energy-efficient technologies into Federal facilities, and to meet the goals and requirements of the Act and this order.

(b) Each agency shall develop and implement a program for its industrial facilities in the aggregate with the intent of increasing energy efficiency by at least 20 percent by the year

2005 as compared to the 1990 benchmark, to the extent these measures are cost-effective, and shall implement all cost-effective water conservation projects. DOE, in coordination with the 656 Committee, shall establish definitions and appropriate indicators of energy and water efficiency, and energy and water consumption and costs, in Federal industrial facilities for the purpose of establishing a base year of 1990.

Sec. 302. Energy and Water Surveys and Audits of Federal Facilities.

(a) **Prioritization Survey.** Each agency responsible for managing Federal facilities shall conduct a prioritization survey, within 18 months of the date of this order, on each of the facilities the agency manages. The surveys shall be used to establish priorities for conducting comprehensive facility audits.

(b) **Comprehensive Facility Audits.** Each agency shall develop and begin implementing a 10-year plan to conduct or obtain comprehensive facility audits, based on prioritization surveys performed under section 302(a) of this order.

(1) Implementation of the plan shall ensure that comprehensive facility audits of approximately 10 percent of the agency's facilities are completed each year. Agencies responsible for managing less than 100 Federal facilities shall plan and execute approximately 10 comprehensive facility audits per year until all facilities have been audited.

(2) Comprehensive audits of facilities performed within the last 3 years may be considered current for the purposes of implementation.

(3) "No-cost" audits, such as those outlined in section 501 of this order, shall be utilized to the extent practicable.

(c) **Exempt Facilities.** Because the mission within facilities exempt from the energy and water reduction requirements under the Act may not allow energy efficiency and water conservation in certain operations, actions shall be taken to reduce all other energy and water waste using the procedures described in the Act and this order. Each agency shall develop and implement a plan to improve energy and water efficiency in such exempt facilities. The prioritization surveys are intended to allow agencies to refine their designation of facilities as "exempt" or "industrial," so that only individual buildings in which industrial or energy-intensive operations are conducted remain designated as "exempt" or "industrial." Within 21 months of the date of this order, each agency shall report to FEMP and to the Office of Management and Budget ("OMB") the redesignations that the agency is making as a result of the prioritization surveys. Agencies may seek exemptions for their facilities pursuant to the Energy Policy and Conservation Act, as amended.

(d) **Leased Facilities.** Agencies shall conduct surveys and audits of leased facilities to the extent practicable and to the extent that the recommendations of such surveys and audits could be implemented under the terms of the lease.

Sec. 303. Implementation of Energy Efficiency and Water Conservation Projects.

(a) Implementation of New Audit Recommendations. Within 1 year of the date of this order, agencies shall identify, based on preliminary recommendations from the prioritization surveys required under section 302 of this order, high priority facilities to audit and shall complete the first 10 percent of the required comprehensive facility audits. Within 180 days of the completion of the comprehensive facility audit of each facility, agencies shall begin implementing cost-effective recommendations for installation of energy efficiency, water conservation, and renewable energy technologies for that facility.

(b) Implementation of Existing Audits. Within 180 days of the date of this order, agencies shall begin to implement cost-effective recommendations from comprehensive audits of facilities performed within the past 3 years, for installation of energy efficiency, water conservation, and renewable energy technologies.

Sec. 304. Solar and Other Renewable Energy. The goal of the Federal Government is to significantly increase the use of solar and other renewable energy sources. DOE shall develop a program for achieving this goal cost-effectively and, within 210 days of the date of this order, submit the program to the 656 Committee for review. DOE shall lead the effort to assist agencies in meeting this goal.

Sec. 305. Minimization of Petroleum-Based Fuel Use in Federal Buildings and Facilities. All agencies shall develop and implement programs to reduce the use of petroleum in their buildings and facilities by switching to a less-polluting and nonpetroleum-based energy source, such as natural gas or solar and other renewable energy sources. Where alternative fuels are not practical or cost-effective, agencies shall strive to improve the efficiency with which they use the petroleum. Each agency shall survey its buildings and facilities that utilize petroleum-based fuel systems to determine where the potential for a dual-fuel capability exists and shall provide dual-fuel capability where cost-effective and practicable.

Sec. 306. New Space.

(a) New Federal Facility Construction. Each agency involved in the construction of a new facility that is to be either owned by or leased to the Federal Government shall:

- (1) design and construct such facility to minimize the life cycle cost of the facility by utilizing energy efficiency, water conservation, or solar or other renewable energy technologies;
- (2) ensure that the design and construction of facilities meet or exceed the energy performance standards applicable to Federal residential or commercial buildings as set forth in 10 CFR 435, local building standards, or a Btu-per-gross-square-foot ceiling as determined by the Task Force within 120 days of the date of this order, whichever will result in a lower life cycle cost over the life of the facility;
- (3) establish and implement, within 270 days of the date of this order, a facility commissioning program that will ensure that the construction of such facilities

meets the requirements outlined in this section before the facility is accepted into the Federal facility inventory; and

- (4) utilize passive solar design and adopt active solar technologies where they are cost-effective.

(b) **New Leases For Existing Facilities.** To the extent practicable and permitted by law, agencies entering into leases, including the renegotiation or extension of existing leases, shall identify the energy and water consumption of those facilities and seek to incorporate provisions into each lease that minimize the cost of energy and water under a life cycle analysis, while maintaining or improving occupant health and safety. These requirements may include renovation of proposed space prior to or within the first year of each lease. Responsible agencies shall seek to negotiate the cost of the lease, taking into account the reduced energy and water costs during the term of the lease.

(c) **Government-Owned Contractor-Operated Facilities.** All Government-owned contractor-operated facilities shall comply with the goals and requirements of this order. Energy and water management goals shall be incorporated into their management contracts.

Sec. 307. Showcase Facilities.

(a) **New Building Showcases.** When an agency constructs at least five buildings in a year, it shall designate at least one building, at the earliest stage of development, to be a showcase highlighting advanced technologies and practices for energy efficiency, water conservation, or use of solar and other renewable energy.

(b) **Demonstrations in Existing Facilities.** Each agency shall designate one of its major buildings to become a showcase to highlight energy or water efficiency and also shall attempt to incorporate cogeneration, solar and other renewable energy technologies, and indoor air quality improvements. Selection of such buildings shall be based on considerations such as the level of nonfederal visitors, historic significance, and the likelihood that visitors will learn from displays and implement similar projects. Within 180 days of the date of this order, each agency shall develop and implement plans and work in cooperation with DOE and, where appropriate, in consultation with the General Services Administration (“GSA”), the Environmental Protection Agency (“EPA”), and other appropriate agencies, to determine the most effective and cost-effective strategies to implement these demonstrations.

Sec. 308. Annual Reporting Requirements.

(a) As required under the Act, the head of each agency shall report annually to the Secretary of Energy and OMB, in a format specified by the Secretary and OMB after consulting with the 656 Committee. The report shall describe the agency's progress in achieving the goals of this order.

(b) The Secretary of Energy shall report to the President and the Congress annually on the implementation of this order. The report should provide information on energy and water use and cost data and shall provide the greatest level of detail practicable for buildings and facilities by energy source.

Sec. 309. Report on Full Fuel Cycle Analysis. DOE shall prepare a report on the issues involved in instituting life cycle analysis for Federal energy and product purchases that address the full fuel cycle costs, including issues concerning energy exploration, development, processing, transportation, storage, distribution, consumption, and disposal, and related impacts on the environment. The report shall examine methods for conducting life cycle analysis and implementing such analysis in the Federal sector and shall make appropriate recommendations. The report shall be forwarded to the President for review.

Sec. 310. Agency Accountability. One year after the date of this order, and every 2 years thereafter, the President's Management Council shall report to the President about efforts and actions by agencies to meet the requirements of this order. In addition, each agency head shall designate a senior official, at the Assistant Secretary level or above, to be responsible for achieving the requirements of this order and shall appoint such official to the 656 Committee. The 656 Committee shall also work to ensure the implementation of this order. The agency senior official and the 656 Committee shall coordinate implementation with the Federal Environmental Executive and Agency Environmental Executives established under Executive Order No. 12873.

PART 4--USE OF INNOVATIVE FINANCING AND CONTRACTUAL MECHANISMS

Sec. 401. Financing Mechanisms. In addition to available appropriations, agencies shall utilize innovative financing and contractual mechanisms, including, but not limited to, utility demand side management programs, shared energy savings contracts, and energy savings performance contracts, to meet the goals and requirements of the Act and this order.

Sec. 402. Workshop for Agencies. Within a reasonable time of the date of this order, the Director of OMB, or his or her designee, and the Task Force shall host a workshop for agencies regarding financing and contracting for energy efficiency, water efficiency, and renewable technology projects. Based on the results of that meeting, the Administrator, Office of Procurement Policy ("OFPP"), shall assist the Administrator of General Services and the Secretary of Energy in eliminating unnecessary regulatory and procedural barriers that slow the utilization of such audit, financing, and contractual

mechanisms or complicate their use. All actions that are cost-effective shall be implemented through the process required in section 403 of this order.

Sec. 403. Elimination of Barriers. Agency heads shall work with their procurement officials to identify and eliminate internal regulations, procedures, or other barriers to implementation of the Act and this order. DOE shall develop a model set of recommendations that will be forwarded to the Administrator of OFPP in order to assist agencies in eliminating the identified barriers.

PART 5--TECHNICAL ASSISTANCE, INCENTIVES, AND AWARENESS

Sec. 501. Technical Assistance.

(a) To assist Federal energy managers in implementing energy efficiency and water conservation projects, DOE shall, within 180 days of the date of this order, develop and make available through the Task Force:

- (1) guidance explaining the relationship between water use and energy consumption and the energy savings achieved through water conservation measures;
- (2) a model solicitation and implementation guide for innovative funding mechanisms referenced in section 401 of this order;
- (3) a national list of companies providing water services in addition to the list of qualified energy service companies as required by the Act;
- (4) the capabilities and technologies available through the national energy laboratories; and
- (5) an annually-updated guidance manual for Federal energy managers that includes, at a minimum, new sample contracts or contract provisions, position descriptions, case studies, recent guidance, and success stories.

(b) The Secretary of Energy, in coordination with the Administrator of General Services, shall make available through the Task Force, within 180 days of the date of this order:

- (1) the national list of qualified water and energy efficiency contractors for inclusion on a Federal schedule; and
- (2) a model provision on energy efficiency and water conservation, for inclusion in new leasing contracts.

(c) Within 180 days of the date of this order, the Administrator of General Services shall:

- (1) contact each utility that has an area-wide contract with GSA to determine which of those utilities will perform “no-cost” audits for energy efficiency and water

conservation and potential solar and other renewable energy sources that comply with Federal life cycle costing procedures set forth in Subpart A, 10 CFR 436;

(2) for each energy and water utility serving the Federal Government, determine which of those utilities offers demand-side management services and incentives and obtain a list and description of those services and incentives; and

(3) prepare a list of those utilities and make that list available to all Federal property management agencies through the Task Force.

(d) Within 18 months of the date of this order, the Administrator of General Services, in consultation with the Secretary of Energy, shall develop procurement techniques, methods, and contracts to speed the purchase and installation of energy, water, and renewable energy technologies in Federal facilities. Such techniques, methods, and contracts shall be designed to utilize both direct funding by the user agency, including energy savings performance contracting, and utility rebates. To the extent permitted by law, the Administrator of OFPP shall assist the Administrator of General Services and the Secretary of Energy by eliminating unnecessary regulatory and procedural barriers that would slow the implementation of such methods, techniques, or contracts or complicate their use.

(e) Agencies are encouraged to seek technical assistance from DOE to develop and implement solar and other renewable energy projects.

(f) DOE shall conduct appropriate training for Federal agencies to assist them in identifying and funding cost-effective projects. This training shall include providing software and other technical tools to audit facilities and identify opportunities. To the extent that resources are available, DOE shall work with utilities and the private sector to encourage their participation in Federal sector programs.

(g) DOE, in coordination with EPA, GSA, and the Department of Defense (“DOD”), shall develop technical assistance services for agencies to help identify energy efficiency, water conservation, indoor air quality, solar and other renewable energy projects, new building design, fuel switching, and life cycle cost analysis. These services shall include, at a minimum, a help line, computer bulletin board, information and education materials, and project tracking methods. Agencies shall identify technical assistance needed to meet the goals and requirements of the Act and this order and seek such assistance from DOE.

(h) The Secretary of Energy and the Administrator of General Services shall explore ways to stimulate energy efficiency, water conservation, and use of solar and other renewable energy sources and shall study options such as new building performance guidelines, life cycle value engineering, and designer/ builder incentives such as award fees. The studies shall be completed within 270 days of the date of this order. The OFPP will issue guidance to agencies on life cycle value engineering within 6 months of the completion of the studies.

(i) The Secretary of Energy and the Administrator of General Services shall develop and distribute through the Task Force a model building commissioning program within 270 days of the date of this order.

(j) The lists, guidelines, and services in this section of the order shall be updated periodically.

Sec. 502. Retention of Savings and Rebates.

(a) Within a reasonable time after the date of this order, the Director of OMB, along with the Secretary of Energy, the Secretary of Defense, and the Administrator of General Services, to the extent practicable and permitted by law, shall develop guidelines and implement procedures to allow agencies, in fiscal year 1995 and beyond, to retain utility rebates and incentives received by the agency and savings from energy efficiency and water conservation efforts as provided in section 152 of the Energy Policy Act of 1992 and 10 U.S.C. 2865 and 2866.

Sec. 503. Performance Evaluations. To recognize the responsibilities of facility managers, designers, energy managers, their superiors, and, to the extent practicable and appropriate, others critical to the implementation of this order, heads of agencies shall include successful implementation of energy efficiency, water conservation, and solar and other renewable energy projects in their position descriptions and performance evaluations.

Sec. 504. Incentive Awards. Agencies are encouraged to review employee incentive programs to ensure that such programs appropriately reward exceptional performance in implementing the Act and this order. Such awards may include monetary incentives such as Quality Step Increases, leave time awards and productivity gainsharing, and nonmonetary and honor awards such as increased authority, additional resources, and a series of options from which employees or teams of employees can choose.

Sec. 505. Project Teams/Franchising.

(a) Agencies are encouraged to establish Energy Efficiency and Environmental Project Teams ("Project Teams") to implement energy efficiency, water conservation, and solar and other renewable energy projects within their respective agencies. DOE shall develop a program to train and support the Project Teams, which should have particular expertise in innovative financing, including shared energy savings and energy savings performance contracting. The purpose of the program is to enable project teams to implement projects quickly and effectively in their own agencies.

(b) Agencies are encouraged to franchise the services of their Project Teams. The ability to access the services of other agencies' teams will foster excellence in project implementation through competition among service providers, while providing an alternative method to meet or exceed the requirements of the Act and this order for agencies that are unable to devote sufficient personnel to implement projects.

Sec. 506. FEMP Account Managers. FEMP shall develop a customer service program and assign account managers to agencies or regions so that each project may have a designated account manager. When requested by an agency, the account manager shall start at the audit phase and follow a project through commissioning, evaluation, and reporting. The account manager shall provide technical assistance and shall have responsibility to see that all actions possible are taken to ensure success of the project.

Sec. 507. Procurement of Energy Efficient Products by Federal Agencies.

- (a) “Best Practice” Technologies. Agencies shall purchase energy-efficient products in accordance with the guidelines issued by OMB, in consultation with the Defense Logistics Agency (“DLA”), DOE, and GSA, under section 161 of the Energy Policy Act of 1992. The guidelines shall include listings of energy-efficient products and practices used in the Federal Government. At a minimum, OMB shall update the listings annually. DLA, DOE, and GSA shall update the portions of the listings for which they have responsibility as new products become available and conditions change.
- (1) Each agency shall purchase products listed as energy-efficient in the guidelines whenever practicable, and whenever they meet the agency’s specific performance requirements and are cost-effective. Each agency shall institute mechanisms to set targets and measure progress.
 - (2) To further encourage a market for highly-energy-efficient products, each agency shall increase, to the extent practicable and cost-effective, purchases of products that are in the upper 25 percent of energy efficiency for all similar products, or products that are at least 10 percent more efficient than the minimum level that meets Federal standards. This requirement shall apply wherever such information is available, either through Federal or industry-approved testing and rating procedures.
 - (3) GSA and DLA, in consultation with DOE, other agencies, States, and industry and other nongovernment organizations, shall provide all agencies with information on specific products that meet the energy-efficiency criteria of this section. Product information should be made available in both printed and electronic formats.
- (b) Federal Market Opportunities. DOE, after consultation with industry, utilities, and other interested parties, shall identify advanced energy-efficient and water-conserving technologies that are technically and commercially feasible but not yet available on the open market. These technologies may include, but are not limited to, the advanced appliance technologies referenced in section 127 of the Energy Policy Act of 1992. DOE, in cooperation with OMB, GSA, DOD, the National Institute of Standards and Technology (“NIST”), and EPA, shall issue a “Federal Procurement Challenge” inviting each Federal agency to commit a specified fraction of their purchases within a given time period to advanced, high-efficiency models of products, provided that these anticipated future products can meet the agency’s energy performance, functionality, and cost requirements.
- (c) Accelerated Retirement of Inefficient Equipment. DOE, in consultation with GSA and other agencies, shall establish guidelines for the cost-effective early retirement of older, inefficient appliances and other energy and water-using equipment in Federal facilities. Such guidelines may take into account significant improvements in energy efficiency and water conservation, opportunities to down-size or otherwise optimize the replacement equipment as a result of associated improvements in building envelope,

system, or industrial process efficiency and reductions in pollutant emissions, use of chlorofluorocarbons, and other environmental improvements.

(d) Review of Barriers. Each agency shall review and revise Federal or military specifications, product descriptions, and standards to eliminate barriers to, and encourage Federal procurement of, products that are energy-efficient or water conserving.

PART 6--WAIVERS

Sec. 601. Waivers. Each agency may determine whether certain requirements in this order are inconsistent with the mission of the agency and seek a waiver of the provision from the Secretary of Energy. Any waivers authorized by the Secretary of Energy shall be included in the annual report on Federal energy management required under the Act.

PART 7--REVOCATION, LIMITATION, AND IMPLEMENTATION

Sec. 701. Executive Order No. 12759, of April 17, 1991, is hereby revoked, except that sections 3, 9, and 10 of that order shall remain effective and shall not be revoked.

Sec. 702. This order is intended only to improve the internal management of the executive branch and is not intended to, and does not create, any right to administrative or judicial review, or any other right or benefit or trust responsibility, substantive or procedural, enforceable by a party against the United States, its agencies or instrumentalities, its officers or employees, or any other person.

Sec. 703. This order shall be effective immediately.

/s/ WILLIAM J. CLINTON
THE WHITE HOUSE
March 8, 1994

Executive Order 12898
Federal Actions to Address Environmental Justice in Minority Populations
and Low-Income Populations

By the authority vested in me as President by the Constitution and the laws of the United States of America, it is hereby ordered as follows:

Section 1-1. Implementation.

1-101. Agency Responsibilities. To the greatest extent practicable and permitted by law, and consistent with the principles set forth in the report on the National Performance Review, each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories and possessions, the District of Columbia, the Commonwealth of Puerto Rico, and the Commonwealth of the Mariana Islands.

1-102. Creation of an Interagency Working Group on Environmental Justice.

(a) Within 3 months of the date of this order, the Administrator of the Environmental Protection Agency ("Administrator") or the Administrator's designee shall convene an interagency Federal Working Group on Environmental Justice ("Working Group"). The Working Group shall comprise the heads of the following executive agencies and offices, or their designees:

(a) Department of Defense; (b) Department of Health and Human Services; (c) Department of Housing and Urban Development; (d) Department of Labor; (e) Department of Agriculture; (f) Department of Transportation; (g) Department of Justice; (h) Department of the Interior; (i) Department of Commerce; (j) Department of Energy; (k) Environmental Protection Agency; (l) Office of Management and Budget; (m) Office of Science and Technology Policy; (n) Office of the Deputy Assistant to the President for Environmental Policy; (o) Office of the Assistant to the President for Domestic Policy; (p) National Economic Council; (q) Council of Economic Advisers; and (r) such other Government officials as the President may designate. The Working Group shall report to the President through the Deputy Assistant to the President for Environmental Policy and the Assistant to the President for Domestic Policy.

(b) The Working Group shall:

(1) provide guidance to Federal agencies on criteria for identifying disproportionately high and adverse human health or environmental effects on minority populations and low-income populations;

(2) coordinate with, provide guidance to, and serve as a clearinghouse for, each Federal agency as it develops an environmental justice strategy as required by section 1-103 of this order, in

order to ensure that the administration, interpretation and enforcement of programs, activities and policies are undertaken in a consistent manner;

(3) assist in coordinating research by, and stimulating cooperation among, the Environmental Protection Agency, the Department of Health and Human Services, the Department of Housing and Urban Development, and other agencies conducting research or other activities in accordance with section 3-3 of this order;

(4) assist in coordinating data collection, required by this order;

(5) examine existing data and studies on environmental justice;

(6) hold public meetings as required in section 5-502(d) of this order; and

(7) develop interagency model projects on environmental justice that evidence cooperation among Federal agencies.

1-103. Development of Agency Strategies.

(a) Except as provided in section 6-605 of this order, each Federal agency shall develop an agency-wide environmental justice strategy, as set forth in subsections (b)-(e) of this section that identifies and addresses disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations. The environmental justice strategy shall list programs, policies, planning and public participation processes, enforcement, and/or rulemakings related to human health or the environment that should be revised to, at a minimum: (1) promote enforcement of all health and environmental statutes in areas with minority populations and low-income populations; (2) ensure greater public participation; (3) improve research and data collection relating to the health of and environment of minority populations and low-income populations; and (4) identify differential patterns of consumption of natural resources among minority populations and low-income populations. In addition, the environmental justice strategy shall include, where appropriate, a timetable for undertaking identified revisions and consideration of economic and social implications of the revisions.

(b) Within 4 months of the date of this order, each Federal agency shall identify an internal administrative process for developing its environmental justice strategy, and shall inform the Working Group of the process.

(c) Within 6 months of the date of this order, each Federal agency shall provide the Working Group with an outline of its proposed environmental justice strategy.

(d) Within 10 months of the date of this order, each Federal agency shall provide the Working Group with its proposed environmental justice strategy.

(e) Within 12 months of the date of this order, each Federal agency shall finalize its environmental justice strategy and provide a copy and written description of its strategy to the Working Group. During the 12 month period from the date of this order, each Federal agency, as part of its environmental justice strategy, shall identify several specific projects that can be promptly undertaken to address particular concerns identified during the development of the proposed environmental justice strategy, and a schedule for implementing those projects.

(f) Within 24 months of the date of this order, each Federal agency shall report to the Working Group on its progress in implementing its agency-wide environmental justice strategy.

(g) Federal agencies shall provide additional periodic reports to the Working Group as requested by the Working Group.

1-104. Reports to the President. Within 14 months of the date of this order, the Working Group shall submit to the President, through the Office of the Deputy Assistant to the President for Environmental Policy and the Office of the Assistant to the President for Domestic Policy, a report that describes the implementation of this order, and includes the final environmental justice strategies described in section 1- 103(e) of this order.

Sec. 2-2. Federal Agency Responsibilities for Federal Programs. Each Federal agency shall conduct its programs, policies, and activities that substantially affect human health or the environment, in a manner that ensures that such programs, policies, and activities do not have the effect of excluding persons (including populations) from participation in, denying persons (including populations) the benefits of, or subjecting persons (including populations) to discrimination under, such programs, policies, and activities, because of their race, color, or national origin.

Sec. 3-3. Research, Data Collection, and Analysis.

3-301. Human Health and Environmental Research and Analysis.

(a) Environmental human health research, whenever practicable and appropriate, shall include diverse segments of the population in epidemiological and clinical studies, including segments at high risk from environmental hazards, such as minority populations, low-income populations and workers who may be exposed to substantial environmental hazards.

(b) Environmental human health analyses, whenever practicable and appropriate, shall identify multiple and cumulative exposures.

(c) Federal agencies shall provide minority populations and low-income populations the opportunity to comment on the development and design of research strategies undertaken pursuant to this order.

3-302. Human Health and Environmental Data Collection and Analysis. To the extent permitted by existing law, including the Privacy Act, as amended (5 U.S.C. section 552a):

(a) each Federal agency, whenever practicable and appropriate, shall collect, maintain, and analyze information assessing and comparing environmental and human health risks borne by populations identified by race, national origin, or income. To the extent practical and appropriate, Federal agencies shall use this information to determine whether their programs, policies, and activities have disproportionately high and adverse human health or environmental effects on minority populations and low-income populations;

(b) In connection with the development and implementation of agency strategies in section 1-103 of this order, each Federal agency, whenever practicable and appropriate, shall collect, maintain and analyze information on the race, national origin, income level, and other readily accessible and appropriate information for areas surrounding facilities or sites expected to have a substantial environmental, human health, or economic effect on the surrounding populations, when such facilities or sites become the subject of a substantial Federal environmental administrative or judicial action. Such information shall be made available to the public, unless prohibited by law; and

(c) Each Federal agency, whenever practicable and appropriate, shall collect, maintain, and analyze information on the race, national origin, income level, and other readily accessible and appropriate information for areas surrounding Federal facilities that are: (1) subject to the reporting requirements under the Emergency Planning and Community Right-to-Know Act, 42 U.S.C. section 11001-11050 as mandated in Executive Order No. 12856; and (2) expected to have a substantial environmental, human health, or economic effect on surrounding populations. Such information shall be made available to the public, unless prohibited by law.

(d) In carrying out the responsibilities in this section, each Federal agency, whenever practicable and appropriate, shall share information and eliminate unnecessary duplication of efforts through the use of existing data systems and cooperative agreements among Federal agencies and with State, local, and tribal governments.

Sec. 4-4. Subsistence Consumption of Fish and Wildlife.

4-401. Consumption Patterns. In order to assist in identifying the need for ensuring protection of populations with differential patterns of subsistence consumption of fish and wildlife, Federal agencies, whenever practicable and appropriate, shall collect, maintain, and analyze information on the consumption patterns of populations who principally rely on fish and/or wildlife for subsistence. Federal agencies shall communicate to the public the risks of those consumption patterns.

4-402. Guidance. Federal agencies, whenever practicable and appropriate, shall work in a coordinated manner to publish guidance reflecting the latest scientific information available concerning methods for evaluating the human health risks associated with the consumption of pollutant-bearing fish or wildlife. Agencies shall consider such guidance in developing their policies and rules.

Sec. 5-5. Public Participation and Access to Information.

(a) The public may submit recommendations to Federal agencies relating to the incorporation of environmental justice principles into Federal agency programs or policies. Each Federal agency shall convey such recommendations to the Working Group.

(b) Each Federal agency may, whenever practicable and appropriate, translate crucial public documents, notices, and hearings relating to human health or the environment for limited English speaking populations.

(c) Each Federal agency shall work to ensure that public documents, notices, and hearings relating to human health or the environment are concise, understandable, and readily accessible to the public.

(d) The Working Group shall hold public meetings, as appropriate, for the purpose of fact-finding, receiving public comments, and conducting inquiries concerning environmental justice. The Working Group shall prepare for public review a summary of the comments and recommendations discussed at the public meetings.

Sec. 6-6. General Provisions.

6-601. Responsibility for Agency Implementation. The head of each Federal agency shall be responsible for ensuring compliance with this order. Each Federal agency shall conduct internal reviews and take such other steps as may be necessary to monitor compliance with this order.

6-602. Executive Order No. 12250. This Executive order is intended to supplement but not supersede Executive Order No. 12250, which requires consistent and effective implementation of various laws prohibiting discriminatory practices in programs receiving Federal financial assistance. Nothing herein shall limit the effect or mandate of Executive Order No. 12250.

6-603. Executive Order No. 12875. This Executive order is not intended to limit the effect or mandate of Executive Order No. 12875.

6-604. Scope. For purposes of this order, Federal agency means any agency on the Working Group, and such other agencies as may be designated by the President, that conducts any Federal program or activity that substantially affects human health or the environment. Independent agencies are requested to comply with the provisions of this order.

6-605. Petitions for Exemptions. The head of a Federal agency may petition the President for an exemption from the requirements of this order on the grounds that all or some of the petitioning agency's programs or activities should not be subject to the requirements of this order.

6-606. Native American Programs. Each Federal agency responsibility set forth under this order shall apply equally to Native American programs. In addition, the Department of the Interior, in coordination with the Working Group, and, after consultation with tribal leaders, shall coordinate steps to be taken pursuant to this order that address Federally-recognized Indian Tribes.

6-607. Costs. Unless otherwise provided by law, Federal agencies shall assume the financial costs of complying with this order.

6-608. General. Federal agencies shall implement this order consistent with, and to the extent permitted by, existing law.

6-609. Judicial Review. This order is intended only to improve the internal management of the executive branch and is not intended to, nor does it create any right, benefit, or trust responsibility, substantive or procedural, enforceable at law or equity by a party against the United States, its agencies, its officers, or any person. This order shall not be construed to create any right to judicial review involving the compliance or noncompliance of the United States, its agencies, its officers, or any other person with this order.

/s/ WILLIAM J. CLINTON
THE WHITE HOUSE
February 11, 1994

Executive Order 12873

Federal Acquisition, Recycling, and Waste Prevention

WHEREAS, the Nation's interest is served when the Federal Government can make more efficient use of natural resources by maximizing recycling and preventing waste wherever possible;

WHEREAS, this Administration is determined to strengthen the role of the Federal Government as an enlightened, environmentally conscious and concerned consumer;

WHEREAS, the Federal Government should—through cost-effective waste prevention and recycling activities—work to conserve disposal capacity, and serve as a model in this regard for private and other public institutions; and

WHEREAS, the use of recycled and environmentally preferable products and services by the Federal Government can spur private sector development of new technologies and use of such products, thereby creating business and employment opportunities and enhancing regional and local economies and the national economy;

NOW, THEREFORE, I, WILLIAM J. CLINTON, by the authority vested in me as President by the Constitution and the laws of the United States of America, including the Solid Waste Disposal Act, Public Law 89-272, 79 Stat. 997, as amended by the Resource Conservation and Recovery Act ("RCRA"), Public Law 94-580, 90 Stat. 2795 as amended (42 U.S.C. 6901-6907), and section 301 of title 3, United States Code, hereby order as follows:

PART 1 - PREAMBLE

Section 101. Consistent with the demands of efficiency and cost effectiveness, the head of each Executive agency shall incorporate waste prevention and recycling in the agency's daily operations and work to increase and expand markets for recovered materials through greater Federal Government preference and demand for such products.

Sec. 102. Consistent with policies established by Office of Federal Procurement Policy ("OFPP") Policy Letter 92-4, agencies shall comply with executive branch policies for the acquisition and use of environmentally preferable products and services and implement cost-effective procurement preference programs favoring the purchase of these products and services.

Sec. 103. This order creates a Federal Environmental Executive and establishes high-level Environmental Executive positions within each agency to be responsible for expediting the implementation of this order and statutes that pertain to this order.

PART 2 - DEFINITIONS

For purposes of this order:

Sec. 201. "Environmentally preferable" means products or services that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose. This comparison may consider raw

materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance, or disposal of the product or service.

Sec. 202. “Executive agency” or “agency” means an Executive agency as defined in 5 U.S.C. 105. For the purpose of this order, military departments, as defined in 5 U.S.C. 102, are covered under the auspices of the Department of Defense.

Sec. 203. “Postconsumer material” means a material or finished product that has served its intended use and has been discarded for disposal or recovery, having completed its life as a consumer item. “Postconsumer material” is a part of the broader category of “recovered material”.

Sec. 204. “Acquisition” means the acquiring by contract with appropriated funds for supplies or services (including construction) by and for the use of the Federal Government through purchase or lease, whether the supplies or services are already in existence or must be created, developed, demonstrated and evaluated. Acquisition begins at the point when agency needs are established and includes the description of requirements to satisfy agency needs, solicitation and selection of sources, award of contracts, contract financing, contract performance, contract administration and those technical and management functions directly related to the process of fulfilling agency needs by contract.

Sec. 205. “Recovered materials” means waste materials and by-products which have been recovered or diverted from solid waste, but such term does not include those materials and by-products generated from, and commonly reused within, an original manufacturing process (42 U.S.C. 6903 (19)).

Sec. 206. “Recyclability” means the ability of a product or material to be recovered from, or otherwise diverted from, the solid waste stream for the purpose of recycling.

Sec. 207. “Recycling” means the series of activities, including collection, separation, and processing, by which products or other materials are recovered from the solid waste stream for use in the form of raw materials in the manufacture of new products other than fuel for producing heat or power by combustion.

Sec. 208. “Waste prevention,” also known as “source reduction,” means any change in the design, manufacturing, purchase or use of materials or products (including packaging) to reduce their amount or toxicity before they become municipal solid waste. Waste prevention also refers to the reuse of products or materials.

Sec. 209. “Waste reduction” means preventing or decreasing the amount of waste being generated through waste prevention, recycling, or purchasing recycled and environmentally preferable products.

Sec. 210. “Life Cycle Cost” means the amortized annual cost of a product, including capital costs, installation costs, operating costs, maintenance costs and disposal costs discounted over the lifetime of the product.

Sec. 211. “Life Cycle Analysis” means the comprehensive examination of a product’s environmental and economic effects throughout its lifetime including new material extraction, transportation, manufacturing, use, and disposal.

PART 3 - THE ROLE OF THE FEDERAL ENVIRONMENTAL EXECUTIVE AND AGENCY ENVIRONMENTAL EXECUTIVES

Sec. 301. Federal Environmental Executive.

(a) A Federal Environmental Executive shall be designated by the President and shall be located within the Environmental Protection Agency (“EPA”). The Federal Environmental Executive shall take all actions necessary to ensure that the agencies comply with the requirements of this order and shall generate an annual report to the Office of Management and Budget (“OMB”), at the time of agency budget submissions, on the actions taken by the agencies to comply with the requirements of this order. In carrying out his or her functions, the Federal Environmental Executive shall consult with the Director of the White House Office on Environmental Policy.

(b) Staffing. A minimum of four (4) full time staff persons are to be provided by the agencies listed below to assist the Federal Environmental Executive, one of whom shall have experience in specification review and program requirements, one of whom shall have experience in procurement practices, and one of whom shall have experience in solid waste prevention and recycling. These four staff persons shall be appointed and replaced as follows:

- (1) a representative from the Department of Defense shall be detailed for not less than one year and no more than two years;
- (2) a representative from the General Services Administration (“GSA”) shall be detailed for not less than one year and no more than two years;
- (3) a representative from EPA shall be detailed for not less than one year and no more than two years; and
- (4) a representative from one other agency determined by the Federal Environmental Executive shall be detailed on a rotational basis for not more than one year.

(c) Administration. Agencies are requested to make their services, personnel and facilities available to the Federal Environmental Executive to the maximum extent practicable for the performance of functions under this order.

(d) Committees and Work Groups. The Federal Environmental Executive shall establish committees and work groups to identify, assess, and recommend actions to be taken to fulfill the goals, responsibilities, and initiatives of the Federal Environmental Executive. As these committees and work groups are created, agencies are requested to designate appropriate personnel in the areas of procurement and acquisition, standards and specifications, electronic commerce, facilities management, waste prevention, and recycling, and others as needed to staff and work on the initiatives of the Executive.

(e) Duties. The Federal Environmental Executive, in consultation with the Agency Environmental Executives, shall:

- (1) identify and recommend initiatives for government-wide implementation that will promote the purposes of this order, including:

- (A) the development of a federal plan for agency implementation of this order and appropriate incentives to encourage the acquisition of recycled and environmentally preferable products by the Federal Government;
 - (B) the development of a federal implementation plan and guidance for instituting economically efficient federal waste prevention, energy and water efficiency programs, and recycling programs within each agency; and
 - (C) the development of a plan for making maximum use of available funding assistance programs;
- (2) collect and disseminate information electronically concerning methods to reduce waste, materials that can be recycled, costs and savings associated with waste prevention and recycling, and current market sources of products that are environmentally preferable or produced with recovered materials;
 - (3) provide guidance and assistance to the agencies in setting up and reporting on agency programs and monitoring their effectiveness; and
 - (4) coordinate appropriate government-wide education and training programs for agencies.

Sec. 302. Agency Environmental Executives. Within 90 days after the effective date of this order, the head of each Executive department and major procuring agency shall designate an Agency Environmental Executive from among his or her staff, who serves at a level no lower than at the Deputy Assistant Secretary level or equivalent. The Agency Environmental Executive will be responsible for:

- (a) coordinating all environmental programs in the areas of procurement and acquisition, standards and specification review, facilities management, waste prevention and recycling, and logistics;
- (b) participating in the interagency development of a Federal plan to:
 - (1) create an awareness and outreach program for the private sector to facilitate markets for environmentally preferable and recycled products and services, promote new technologies, improve awareness about federal efforts in this area, and expedite agency efforts to procure new products identified under this order;
 - (2) establish incentives, provide guidance and coordinate appropriate educational programs for agency employees; and
 - (3) coordinate the development of standard agency reports required by this order;
- (c) reviewing agency programs and acquisitions to ensure compliance with this order.

PART 4 - ACQUISITION PLANNING AND AFFIRMATIVE PROCUREMENT PROGRAMS

Sec. 401. Acquisition Planning. In developing plans, drawings, work statements, specifications, or other product descriptions, agencies shall consider the following factors: elimination of virgin material requirements; use of recovered materials; reuse of product; life cycle cost; recyclability; use of environmentally preferable products; waste prevention (including toxicity reduction or elimination); and ultimate disposal, as appropriate. These factors should be considered in acquisition planning for all procurements and in the evaluation and award of contracts, as appropriate. Program and acquisition managers should take an active role in these activities.

Sec. 402. Affirmative Procurement Programs. The head of each Executive agency shall develop and implement affirmative procurement programs in accordance with RCRA section 6002 (42 U.S.C. 6962) and this order. Agencies shall ensure that responsibilities for preparation, implementation and monitoring of affirmative procurement programs are shared between the program personnel and procurement personnel. For the purposes of all purchases made pursuant to this order, EPA, in consultation with such other Federal agencies as appropriate, shall endeavor to maximize environmental benefits, consistent with price, performance and availability considerations, and shall adjust bid solicitation guidelines as necessary in order to accomplish this goal.

(a) Agencies shall establish affirmative procurement programs for all designated EPA guideline items purchased by their agency. For newly designated items, agencies shall revise their internal programs within one year from the date EPA designated the new items.

(b) For the currently designated EPA guideline items, which are:

- (i) concrete and cement containing fly ash;
- (ii) recycled paper products;
- (iii) re-refined lubricating oil;
- (iv) retread tires; and
- (v) insulation containing recovered materials; and for all future guideline items, agencies shall ensure that their affirmative procurement programs require that 100 percent of their purchases of products meet or exceed the EPA guideline standards unless written justification is provided that a product is not available competitively within a reasonable time frame, does not meet appropriate performance standards, or is only available at an unreasonable price.

(c) The Agency Environmental Executives will track agencies' purchases of designated EPA guideline items and report agencies' purchases of such guideline items to the Federal Environmental Executive. Agency Environmental Executives will be required to justify to the Federal Environmental Executive as to why the item(s) have not been purchased or submit a plan for how the agencies intend to increase their purchases of the designated item(s).

(d) Agency affirmative procurement programs, to the maximum extent practicable, shall encourage that:

- (1) documents be transferred electronically,

- (2) all government documents printed internally be printed double-sided, and
- (3) contracts, grants, and cooperative agreements issued after the effective date of this order include provisions that require documents to be printed double-sided on recycled paper meeting or exceeding the standards established in this order or in future EPA guidelines.

Sec. 403. Procurement of Existing Guideline Items. Within 90 days after the effective date of this order, the head of each Executive agency that has not implemented an affirmative procurement program shall ensure that the affirmative procurement program has been established and is being implemented to the maximum extent practicable.

Sec. 404. Electronic Acquisition System. To reduce waste by eliminating unnecessary paper transactions in the acquisition process and to foster accurate data collection and reporting of agencies' purchases of recycled content and environmentally preferred products, the executive branch will implement an electronic commerce system consistent with the recommendations adopted as a result of the National Performance Review.

PART 5 - STANDARDS, SPECIFICATIONS AND DESIGNATION OF ITEMS

Sec. 501. Specifications, Product Descriptions and Standards. Where applicable, Executive agencies shall review and revise federal and military specifications, product descriptions and standards to enhance Federal procurement of products made from recovered materials or that are environmentally preferable. When converting to a Commercial Item Description (CID), agencies shall ensure that environmental factors have been considered and that the CID meets or exceeds the environmentally preferable criteria of the government specification or product description. Agencies shall report annually on their compliance with this section to the Federal Environmental Executive for incorporation into the annual report to OMB referred to in section 301 of this order.

(a) If an inconsistency with RCRA Section 6002 or this order is identified in a specification, standard, or product description, the Federal Environmental Executive shall request that the Environmental Executive of the pertinent agency advise the Federal Environmental Executive as to why the specification cannot be revised or submit a plan for revising it within 60 days.

(b) If an agency is able to revise an inconsistent specification but cannot do so within 60 days, it is the responsibility of that agency's Environmental Executive to monitor and implement the plan for revising it.

Sec. 502. Designation of Items that Contain Recovered Materials. In order to expedite the process of designating items that are or can be made with recovered materials, EPA shall institute a new process for designating these items in accordance with RCRA section 6002(e) as follows.

(a) EPA shall issue a Comprehensive Procurement Guideline containing designated items that are or can be made with recovered materials.

- (1) The proposed guideline shall be published for public comment in the Federal Register within 180 days after the effective date of this order and shall be updated annually after publication for comment to include additional items.

(2) Once items containing recovered materials have been designated by EPA through the new process established pursuant to this section and in compliance with RCRA section 6002, agencies shall modify their affirmative procurement programs to require that, to the maximum extent practicable, their purchases of products meet or exceed the EPA guideline standards unless written justification is provided that a product is not available competitively, not available within a reasonable time frame, does not meet appropriate performance standards, or is only available at an unreasonable price.

(b) Concurrent with the issuance of the Comprehensive Procurement Guideline required by section 502(a) of this order, EPA shall publish for public comment in the Federal Register Recovered Material Advisory Notice(s) that present the range of recovered material content levels within which the designated recycled items are currently available. These levels shall be updated periodically after publication for comment to reflect changes in market conditions.

Sec. 503. Guidance for Environmentally Preferable Products. In accordance with this order, EPA shall issue guidance that recommends principles that Executive agencies should use in making determinations for the preference and purchase of environmentally preferable products.

(a) Proposed guidance shall be published for public comment in the Federal Register within 180 days after the effective date of this order, and may be updated after public comment, as necessary, thereafter. To the extent necessary, EPA may issue additional guidance for public comment on how the principles can be applied to specific product categories.

(b) Once final guidance for environmentally preferable products has been issued by EPA, Executive agencies shall use these principles, to the maximum extent practicable, in identifying and purchasing environmentally preferable products and shall modify their procurement programs by reviewing and revising specifications, solicitation procedures, and policies as appropriate.

Sec. 504. Minimum Content Standard for Printing and Writing Paper. Executive agency heads shall ensure that agencies shall meet or exceed the following minimum materials content standards when purchasing or causing the purchase of printing and writing paper:

(a) For high speed copier paper, offset paper, forms bond, computer printout paper, carbonless paper, file folders, and white woven envelopes, the minimum content standard shall be no less than 20 percent postconsumer materials beginning December 31, 1994. This minimum content standard shall be increased to 30 percent beginning on December 31, 1998.

(b) For other uncoated printing and writing paper, such as writing and office paper, book paper, cotton fiber paper, and cover stock, the minimum content standard shall be 50 percent recovered materials, including 20 percent postconsumer materials beginning on December 31, 1994. This standard shall be increased to 30 percent beginning on December 31, 1998.

(c) As an alternative to meeting the standards in sections

504(a) and (b), for all printing and writing papers, the minimum content standard shall be no less than 50 percent recovered materials that are a waste material byproduct of a finished product other than a paper or textile product which would otherwise be disposed of in a landfill, as determined by the State in which the facility is located.

- (1) The decision not to procure recycled content printing and writing paper meeting the standards specified in this section shall be based solely on a determination by the contracting officer that a satisfactory level of competition does not exist, that the items are not available within a reasonable time period, or that the available items fail to meet reasonable performance standards established by the agency or are only available at an unreasonable price.
- (2) Each agency should implement waste prevention techniques, as specified in section 402(d) of this order, so that total annual expenditures for recycled content printing and writing paper do not exceed current annual budgets for paper products as measured by average annual expenditures, adjusted for inflation based on the Consumer Price Index or other suitable indices. In determining a target budget for printing and writing paper, agencies may take into account such factors as employee increases or decreases, new agency or statutory initiatives, and episodic or unique requirements (e.g., census).
- (3) Effective immediately, all agencies making solicitations for the purchase of printing and writing paper shall seek bids for paper with postconsumer material or recovered waste material as described in section 504(c).

Sec. 505. Revision of Brightness Specifications and Standards. The General Services Administration and other Federal agencies are directed to identify, evaluate and revise or eliminate any standards or specifications unrelated to performance that present barriers to the purchase of paper or paper products made by production processes that minimize emissions of harmful byproducts. This evaluation shall include a review of unnecessary brightness and stock clause provisions, such as lignin content and chemical pulp requirements. The GSA shall complete the review and revision of such specifications within six months after the effective date of this order, and shall consult closely with the Joint Committee on Printing during such process. The GSA shall also compile any information or market studies that may be necessary to accomplish the objectives of this provision.

Sec. 506. Procurement of Re-refined Lubricating Oil and Retread Tires. Within 180 days after the effective date of this order, agencies shall implement the EPA procurement guidelines for re-refined lubricating oil and retread tires.

(a) Commodity managers shall finalize revisions to specifications for re-refined oil and retread tires, and develop and issue specifications for tire retreading services, as commodity managers shall take affirmative steps to procure these items in accordance with RCRA section 6002.

(b) Once these items become available, fleet managers shall take affirmative steps to procure these items in accordance with RCRA section 6002.

Sec. 507. Product Testing. The Secretary of Commerce, through the National Institute of Standards and Technology (“NIST”), shall establish a program for testing the performance of products containing recovered materials or deemed to be environmentally preferable. NIST shall work with EPA, GSA and other public and private sector organizations that conduct appropriate life cycle analyses to gather information that will assist agencies in making selections of products and services that are environmentally preferable.

(a) NIST shall publish appropriate reports describing testing programs, their results, and recommendations for testing methods and related specifications for use by Executive agencies and other interested parties.

(b) NIST shall coordinate with other Executive and State agencies to avoid duplication with existing testing programs.

PART 6 - AGENCY GOALS AND REPORTING REQUIREMENTS

Sec. 601. Goals for Waste Reduction. Each agency shall establish a goal for solid waste prevention and a goal for recycling to be achieved by the year 1995. These goals shall be submitted to the Federal Environmental Executive within 180 days after the effective date of this order. Progress on attaining these goals shall be reported by the agencies to the Federal Environmental Executive for the annual report specified in section 301 of this order.

Sec. 602. Goal for Increasing the Procurement of Recycled and Other Environmentally Preferable Products. Agencies shall strive to increase the procurement of products that are environmentally preferable or that are made with recovered materials and set annual goals to maximize the number of recycled products purchased, relative to non-recycled alternatives.

Sec. 603. Review of Implementation. The President’s Council on Integrity and Efficiency (“PCIE”) will request that the Inspectors General periodically review agencies’ affirmative procurement programs and reporting procedures to ensure their compliance with this order.

PART 7 - APPLICABILITY AND OTHER REQUIREMENTS

Sec. 701. Contractor Operated Facilities. Contracts that provide for contractor operation of a government-owned or leased facility, awarded after the effective date of this order, shall include provisions that obligate the contractor to comply with the requirements of this order within the scope of its operations. In addition, to the extent permitted by law and where economically feasible, existing contracts should be modified.

Sec. 702. Real Property Acquisition and Management. Within 90 days after the effective date of this order, and to the extent permitted by law and where economically feasible, Executive agencies shall ensure compliance with the provisions of this order in the acquisition and management of federally owned and leased space. GSA and other Executive agencies shall also include environmental and recycling provisions in the acquisition of all leased space and in the construction of new federal buildings.

Sec. 703. Retention of Funds. Within 90 days after the effective date of this order, the Administrator of GSA shall develop a legislative proposal providing authority for Executive agencies to retain a share of the proceeds from the sale of materials recovered through recycling or waste prevention programs and specifying the eligibility requirements for the materials being recycled.

Sec. 704. Model Facility Programs. Each Executive department and major procuring agency shall establish model facility demonstration programs that include comprehensive waste prevention and recycling programs and emphasize the procurement of recycled and environmentally preferable products and services using an electronic data interchange (EDI) system.

Sec. 705. Recycling Programs. Each Executive agency that has not already done so shall initiate a program to promote cost effective waste prevention and recycling of reusable materials in all of its facilities. The recycling programs implemented pursuant to this section must be compatible with applicable State and local recycling requirements. Federal agencies shall also consider cooperative ventures with State and local governments to promote recycling and waste reduction in the community.

PART 8 - AWARENESS

Sec. 801. Agency Awards Program. A government-wide award will be presented annually by the White House to the best, most innovative program implementing the objectives of this order to give greater visibility to these efforts so that they can be incorporated government-wide.

Sec. 802. Internal Agency Awards Programs. Each agency shall develop an internal agency-wide awards program, as appropriate, to reward its most innovative environmental programs. Winners of agency-wide awards will be eligible for the White House award program.

PART 9 - REVOCATION, LIMITATION AND IMPLEMENTATION

Sec. 901. Executive Order No. 12780, dated October 31, 1991, is hereby revoked.

Sec. 902. This order is intended only to improve the internal management of the executive branch and is not intended to create any right or benefit, substantive or procedural, enforceable at law by a party against the United States, its agencies, its officers, or any other person.

Sec. 903. The policies expressed in this order, including the requirements and elements for effective agency affirmative procurement programs, shall be implemented and incorporated in the Federal Acquisition Regulation (FAR) within 180 days after the effective date of this order. The implementation language shall consist of providing specific direction and guidance on agency programs for preference, promotion, estimation, certification, reviewing and monitoring.

Sec. 904. This order shall be effective immediately.

/s/ WILLIAM J. CLINTON
THE WHITE HOUSE

October 20, 1993

Executive Order 12856
Federal Compliance With Right-To-Know Laws
and Pollution Prevention Requirements

WHEREAS, the Emergency Planning and Community Right-to-Know Act of 1986 (42 U.S.C. 11001-11050) (EPCRA) established programs to provide the public with important information on the hazardous and toxic chemicals in their communities, and established emergency planning and notification requirements to protect the public in the event of a release of extremely hazardous substances;

WHEREAS, the Federal Government should be a good neighbor to local communities by becoming a leader in providing information to the public concerning toxic and hazardous chemicals and extremely hazardous substances at Federal facilities, and in planning for and preventing harm to the public through the planned or unplanned releases of chemicals;

WHEREAS, the Pollution Prevention Act of 1990 (42 U.S.C. 13101-13109) (PPA) established that it is the national policy of the United States that, whenever feasible, pollution should be prevented or reduced at the source; that pollution that cannot be prevented should be recycled in an environmentally safe manner; that pollution that cannot be prevented or recycled should be treated in an environmentally safe manner; and that disposal or other release into the environment should be employed only as a last resort and should be conducted in an environmentally safe manner;

WHEREAS, the PPA required the Administrator of the Environmental Protection Agency (EPA) to promote source reduction practices in other agencies;

WHEREAS, the Federal Government should become a leader in the field of pollution prevention through the management of its facilities, its acquisition practices, and in supporting the development of innovative pollution prevention programs and technologies;

WHEREAS, the environmental, energy, and economic benefits of energy and water use reductions are very significant; the scope of innovative pollution prevention programs must be broad to adequately address the highest-risk environmental problems and to take full advantage of technological opportunities in sectors other than industrial manufacturing; the Energy Policy Act of 1992 (Public Law 102-486 of October 24, 1992) requires the Secretary of Energy to work with other Federal agencies to significantly reduce the use of energy and reduce the related environmental impacts by promoting use of energy efficiency and renewable energy technologies; and more

WHEREAS, as the largest single consumer in the Nation, the Federal Government has the opportunity to realize significant economic as well as environmental benefits of pollution prevention;

AND IN ORDER TO:

Ensure that all Federal agencies conduct their facility management and acquisition activities so that, to the maximum extent practicable, the quantity of toxic chemicals entering any wastestream, including any releases to the environment, is reduced as expeditiously as possible through source reduction; that waste that is generated is recycled to the maximum extent practicable; and that any wastes remaining are stored, treated or disposed of in a manner protective of public health and the environment;

Require Federal agencies to report in a public manner toxic chemicals entering any wastestream from their facilities, including any releases to the environment, and to improve local emergency planning, response, and accident notification; and Help encourage markets for clean technologies and safe alternatives to extremely hazardous substances or toxic chemicals through revisions to specifications and standards, the acquisition and procurement process, and the testing of innovative pollution prevention technologies at Federal facilities or in acquisitions;

NOW THEREFORE, by the authority vested in me as President by the Constitution and the laws of the United States of America, including the EPCRA, the PPA, and section 301 of title 5, United States Code, it is hereby ordered as follows:

Section 1. Applicability.

1-101. As delineated below, the head of each Federal agency is responsible for ensuring that all necessary actions are taken for the prevention of pollution with respect to that agency's activities and facilities, and for ensuring that agency's compliance with pollution prevention and emergency planning and community right-to-know provisions established pursuant to all implementing regulations issued pursuant to EPCRA and PPA.

1-102. Except as otherwise noted, this order is applicable to all Federal agencies that either own or operate a "facility" as that term is defined in section 329(4) of EPCRA, if such facility meets the threshold requirements set forth in EPCRA for compliance as modified by section 3-304(b) of this order ("covered facilities"). Except as provided in section 1-103 and section 1-104 below, each Federal agency must apply all of the provisions of this order to each of its covered facilities, including those facilities which are subject, independent of this order, to the provisions of EPCRA and PPA (e.g., certain Government-owned/contractor-operated facilities (GOCO's), for chemicals meeting EPCRA thresholds). This order does not apply to Federal agency facilities outside the customs territory of the United States, such as United States diplomatic and consular missions abroad.

1-103. Nothing in this order alters the obligations which GOCO's and Government corporation facilities have under EPCRA and PPA independent of this order or subjects such facilities to EPCRA or PPA if they are otherwise excluded. However, consistent with section 1-104 below, each Federal agency shall include the releases and transfers

from all such facilities when meeting all of the Federal agency's responsibilities under this order.

1-104. To facilitate compliance with this order, each Federal agency shall provide, in all future contracts between the agency and its relevant contractors, for the contractor to supply to the Federal agency all information the Federal agency deems necessary for it to comply with this order. In addition, to the extent that compliance with this order is made more difficult due to lack of information from existing contractors, Federal agencies shall take practical steps to obtain the information needed to comply with this order from such contractors.

Sec. 2-2. Definitions.

2-201. All definitions found in EPCRA and PPA and implementing regulations are incorporated in this order by reference, with the following exception: for the purposes of this order, the term "person", as defined in section 329(7) of EPCRA, also includes Federal agencies.

2-202. Federal agency means an Executive agency, as defined in 5 U.S.C. 105. For the purpose of this order, military departments, as defined in 5 U.S.C. 102, are covered under the auspices of the Department of Defense.

2-203. Pollution Prevention means "source reduction," as defined in the PPA, and other practices that reduce or eliminate the creation of pollutants through: (a) increased efficiency in the use of raw materials, energy, water, or other resources; or (b) protection of natural resources by conservation.

2-204. GOCO means a Government-owned/contractor-operated facility which is owned by the Federal Government but all or portions of which are operated by private contractors.

2-205. Administrator means the Administrator of the EPA.

2-206. Toxic Chemical means a substance on the list described in section 313(c) of EPCRA.

2-207. Toxic Pollutants. For the purposes of section 3-302(a) of this order, the term "toxic pollutants" shall include, but is not necessarily limited to, those chemicals at a Federal facility subject to the provisions of section 313 of EPCRA as of December 1, 1993. Federal agencies also may choose to include releases and transfers of other chemicals, such as "extremely hazardous chemicals" as defined in section 329(3) of EPCRA, hazardous wastes as defined under the Resource Conservation and Recovery Act of 1976 (42 U.S.C. 6901-6986) (RCRA), or hazardous air pollutants under the Clean Air Act Amendments (42 U.S.C. 7403-7626); however, for the purposes of establishing the agency's baseline under 3-302(c), such "other chemicals" are in addition to (not instead

of) the section 313 chemicals. The term "toxic pollutants" does not include hazardous waste subject to remedial action generated prior to the date of this order.

Sec. 3-3. Implementation.

3-301. Federal Agency Strategy. Within 12 months of the date of this order, the head of each Federal agency must develop a written pollution prevention strategy to achieve the requirements specified in sections 3-302 through 3-305 of this order for that agency. A copy thereof shall be provided to the Administrator. Federal agencies are encouraged to involve the public in developing the required strategies under this order and in monitoring their subsequent progress in meeting the requirements of this order. 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. Toxic Chemical Reduction Goals.

(a) The head of each Federal agency subject to this order shall ensure that the agency develops voluntary goals to reduce the agency's total releases of toxic chemicals to the environment and off-site transfers of such toxic chemicals for treatment and disposal from facilities covered by this order by 50 percent by December 31, 1999. To the maximum extent practicable, such reductions shall be achieved by implementation of source reduction practices.

(b) The baseline for measuring reductions for purposes of achieving the 50 percent reduction goal for each Federal agency shall be the first year in which releases of toxic chemicals to the environment and off-site transfers of such chemicals for treatment and disposal are publicly reported. The baseline amount as to which the 50 percent reduction goal applies shall be the aggregate amount of toxic chemicals reported in the baseline year for all of that Federal agency's facilities meeting the threshold applicability requirements set forth in section 1-102 of this order. In no event shall the baseline be later than the 1994 reporting year.

(c) Alternatively, a Federal agency may choose to achieve a 50 percent reduction goal for toxic pollutants. In such event, the Federal agency shall delineate the scope of its reduction program in the written pollution prevention strategy that is required by section

3-301 of this order. The baseline for measuring reductions for purposes of achieving the 50 percent reduction requirement for each Federal agency shall be the first year in which releases of toxic pollutants to the environment and off-site transfers of such chemicals for treatment and disposal are publicly reported for each of that Federal agency's facilities encompassed by section 3-301. In no event shall the baseline year be later than the 1994 reporting year. The baseline amount as to which the 50 percent reduction goal applies shall be the aggregate amount of toxic pollutants reported by the agency in the baseline year. For any toxic pollutants included by the agency in determining its baseline under this section, in more addition to toxic chemicals under EPCRA, the agency shall report on such toxic pollutants annually under the provisions of section 3-304 of this order, if practicable, or through an agency report that is made available to the public.

(d) The head of each Federal agency shall ensure that each of its covered facilities develops a written pollution prevention plan no later than the end of 1995, which sets forth the facility's contribution to the goal established in section 3-302(a) of this order. Federal agencies shall conduct assessments of their facilities as necessary to ensure development of such plans and of the facilities' pollution prevention programs.

3-303. Acquisition and Procurement Goals.

(a) Each Federal agency shall establish a plan and goals for eliminating or reducing the unnecessary acquisition by that agency of products containing extremely hazardous substances or toxic chemicals. Similarly, each Federal agency shall establish a plan and goal for voluntarily reducing its own manufacturing, processing, and use of extremely hazardous substances and toxic chemicals. Priorities shall be developed by Federal agencies, in coordination with EPA, for implementing this section.

(b) Within 24 months of the date of this order, the Department of Defense (DOD) and the General Services Administration (GSA), and other agencies, as appropriate, shall review their agency's standardized documents, including specifications and standards, and identify opportunities to eliminate or reduce the use by their agency of extremely hazardous substances and toxic chemicals, consistent with the safety and reliability requirements of their agency mission. The EPA shall assist agencies in meeting the requirements of this section, including identifying substitutes and setting priorities for these reviews. By 1999, DOD, GSA and other affected agencies shall make all appropriate revisions to these specifications and standards.

(c) Any revisions to the Federal Acquisition Regulation (FAR) necessary to implement this order shall be made within 24 months of the date of this order.

(d) Federal agencies are encouraged to develop and test innovative pollution prevention technologies at their facilities in order to encourage the development of strong markets for such technologies. Partnerships should be encouraged between industry, Federal agencies, Government laboratories, academia, and others to assess and deploy innovative environmental technologies for domestic use and for markets abroad.

3-304. Toxics Release Inventory/Pollution Prevention Act Reporting. (a) The head of each Federal agency shall comply with the provisions set forth in section 313 of EPCRA, section 6607 of PPA, all implementing regulations, and future amendments to these authorities, in light of applicable guidance as provided by EPA.

(b) The head of each Federal agency shall comply with these provisions without regard to the Standard Industrial Classification (SIC) delineations that apply to the Federal agency's facilities, and such reports shall be for all releases, transfers, and wastes at such Federal agency's facility without regard to the SIC code of the activity leading to the release, transfer, or waste. All other existing statutory or regulatory limitations or exemptions on the application of EPCRA section 313 shall apply to the reporting requirements set forth in section 3-304(a) of this order.

(c) The first year of compliance shall be no later than for the 1994 calendar year, with reports due on or before July 1, 1995.

3-305. Emergency Planning and Community Right-to-Know Reporting Responsibilities. The head of each Federal agency shall comply with the provisions set forth in sections 301 through 312 of EPCRA, all implementing regulations, and future amendments to these authorities, in light of any applicable guidance as provided by EPA. Effective dates for compliance shall be:

(a) With respect to the provisions of section 302 of EPCRA, emergency planning notification shall be made no later than 7 months after the date of this order.

(b) With respect to the provisions of section 303 of EPCRA, all information necessary for the applicable Local Emergency Planning Committee (LEPC's) to prepare or revise local Emergency Response Plans shall be provided no later than 1 year after the date of this order.

(c) To the extent that a facility is required to maintain Material Safety Data Sheets under any provisions of law or Executive order, information required under section 311 of EPCRA shall be submitted no later than 1 year after the date of this order, and the first year of compliance with section 312 shall be no later than the 1994 calendar year, with reports due on or before March 1, 1995.

(d) The provisions of section 304 of EPCRA shall be effective beginning January 1, 1994.

(e) These compliance dates are not intended to delay implementation of earlier timetables already agreed to by Federal agencies and are inapplicable to the extent they interfere with those timetables.

Sec. 4-4. Agency Coordination.

4-401. By February 1, 1994, the Administrator shall convene an Interagency Task Force composed of the Administrator, the Secretaries of Commerce, Defense, and Energy, the Administrator of General Services, the Administrator of the Office of Procurement Policy in the Office of Management and Budget, and such other agency officials as deemed appropriate based upon lists of potential participants submitted to the Administrator pursuant to this section by the agency head. Each agency head may designate other senior agency officials to act in his/her stead, where appropriate. The Task Force will assist the agency heads in the implementation of the activities required under this order.

4-402. Federal agencies subject to the requirements of this order shall submit annual progress reports to the Administrator beginning on October 1, 1995. These reports shall include a description of the progress that the agency has made in complying with all aspects of this order, including the pollution reductions requirements. This reporting requirement shall expire after the report due on October 1, 2001.

4-403. Technical Advice. Upon request and to the extent practicable, the Administrator shall provide technical advice and assistance to Federal agencies in order to foster full compliance with this order. In addition, to the extent practicable, all Federal agencies subject to this order shall provide technical assistance, if requested, to LEPC's in their development of emergency response plans and in fulfillment of their community right-to-know and risk reduction responsibilities.

4-404. 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 extent practicable, a life cycle analysis and total cost accounting principles to all projects needed to meet the requirements of this order.

4-405. Federal Government Environmental Challenge Program.

The Administrator shall establish a "Federal Government Environmental Challenge Program" to recognize outstanding environmental management performance in Federal agencies and facilities. The program shall consist of two components that challenge Federal agencies; (a) to agree to a code of environmental principles to be developed by EPA, in cooperation with other agencies, that emphasizes pollution prevention, sustainable development and state-of-the-art environmental management programs, and (b) to submit applications to EPA for individual Federal agency facilities for recognition as "Model Installations." The program shall also include a means for recognizing individual Federal employees who demonstrate outstanding leadership in pollution prevention.

Sec. 5-5. Compliance.

5-501. By December 31, 1993, the head of each Federal agency shall provide the Administrator with a preliminary list of facilities that potentially meet the requirements for reporting under the threshold provisions of EPCRA, PPA, and this order.

5-502. The head of each Federal agency is responsible for ensuring that such agency take all necessary actions to prevent pollution in accordance with this order, and for that agency's compliance with the provisions of EPCRA and PPA. Compliance with EPCRA and PPA means compliance with the same substantive, procedural, and other statutory and regulatory requirements that would apply to a private person. Nothing in this order shall be construed as making the provisions of sections 325 and 326 of EPCRA applicable to any Federal agency or facility, except to the extent that such Federal agency or facility would independently be subject to such provisions. EPA shall consult with Federal agencies, if requested, to determine the applicability of this order to particular agency facilities.

5-503. 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 sections 3-304 and 3-305 of this order.

5-504. The Administrator, in consultation with the heads of Federal agencies, may conduct such reviews and inspections as may be necessary to monitor compliance with sections 3-304 and 3-305 of this order. Except as excluded under section 6-601 of this order, all Federal agencies are encouraged to cooperate fully with the efforts of the Administrator to ensure compliance with sections 3-304 and 3-305 of this order.

5-505. Federal agencies are further encouraged to comply with all state and local right-to-know and pollution prevention requirements to the extent that compliance with such laws and requirements is not otherwise already mandated.

5-506. Whenever the Administrator notifies a Federal agency that it is not in compliance with an applicable provision of this order, the Federal agency shall achieve compliance as promptly as is practicable.

5-507. The EPA shall report annually to the President on Federal agency compliance with the provisions of section 3-304 of this order.

5-508. To the extent permitted by law and unless such documentation is withheld pursuant to section 6-601 of this order, 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. When the reports are submitted to EPA, EPA shall compile the strategies, plans, and reports and make them publicly available as well. 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.

Sec. 6-6. Exemption.

6-601. In the interest of national security, the head of a Federal agency may request from the President an exemption from complying with the provisions of any or all aspects of this order for particular Federal agency facilities, provided that the procedures set forth in section 120(j)(1) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (42 U.S.C. 9620(j)(1)), are followed. To the maximum extent practicable, and without compromising national security, all Federal agencies shall strive to comply with the purposes, goals, and implementation steps set forth in this order.

Sec. 7-7. General Provisions.

7-701. Nothing in this order shall create any right or benefit, substantive or procedural, enforceable by a party against the United States, its agencies or instrumentalities, its officers or employees, or any other person.

/s/ WILLIAM J. CLINTON
THE WHITE HOUSE
August 3, 1993

Executive Order 12843
Procurement Requirements and Policies for Federal Agencies
for Ozone-Depleting

WHEREAS, the essential function of the stratospheric ozone layer is shielding the Earth from dangerous ultraviolet radiation; and

WHEREAS, the production and consumption of substances that cause the depletion of stratospheric ozone are being rapidly phased out on a worldwide basis with the support and encouragement of the United States; and

WHEREAS, the Montreal Protocol on Substances that Deplete the Ozone Layer, to which the United States is a signatory, calls for a phaseout of the production and consumption of these substances; and

WHEREAS, the Federal Government, as one of the principal users of these substances, is able through affirmative procurement practices to reduce significantly the use of these substances and to provide leadership in their phaseout; and

WHEREAS, the use of alternative substances and new technologies to replace these ozone-depleting substances may contribute positively to the economic competitiveness on the world market of U.S. manufacturers of these innovative safe alternatives;

NOW, THEREFORE, I, WILLIAM JEFFERSON CLINTON, by the authority vested in me as President by the Constitution and the laws of the United States of America, including the 1990 amendments to the Clean Air Act ("Clean Air Act Amendments"), Public Law 101-549, and in order to reduce the Federal Government's procurement and use of substances that cause stratospheric ozone depletion, do hereby order as follows:

Section 1. Federal Agencies. Federal agencies shall, to the extent practicable:

(a) conform their procurement regulations and practices to the policies and requirements of Title VI of the Clean Air Act Amendments, which deal with stratospheric ozone protection;

(b) maximize the use of safe alternatives to ozone- depleting substances;

(c) evaluate the present and future uses of ozone- depleting substances, including making assessments of existing and future needs for such materials and evaluate their use of and plans for recycling;

(d) revise their procurement practices and implement cost-effective programs both to modify specifications and contracts that require the use of ozone-depleting substances and to substitute non-ozone-depleting substances to the extent economically practicable; and

(e) exercise leadership, develop exemplary practices, and disseminate information on successful efforts in phasing out ozone-depleting substances.

Sec. 2. Definitions.

(a) "Federal agency" means any executive department, military department, or independent agency within the meaning of 5 U.S.C. 101, 102, or 104(1), respectively.

(b) "Procurement" and "acquisition" are used interchangeably to refer to the processes through which Federal agencies purchase products and services

(c) "Procurement regulations, policies and procedures" encompasses the complete acquisition process, including the generation of product descriptions by individuals responsible for determining which substances must be acquired by the agency to meet its mission.

(d) "Ozone-depleting substances" means the substances controlled internationally under the Montreal Protocol and nationally under Title VI of the Clean Air Act Amendments. This includes both Class I and Class II substances as follows:

(i) "Class I substance" means any substance designated as Class I in the Federal Register notice of July 30, 1992 (57 Fed. Reg. 33753), including chlorofluorocarbons, halons, carbon tetrachloride, and methyl chloroform and any other substance so designated by the Environmental Protection Agency ("EPA") by regulation at a later date; and

(ii) "Class II substance" means any substance designated as Class II in the Federal Register notice of July 30, 1992 (57 Fed. Reg. 33753), including hydrochlorofluorocarbons and any other substances so designated by EPA by regulation at a later date.

(e) "Recycling" is used to encompass recovery and reclamation, as well as the reuse of controlled substances.

Sec. 3. Policy. It is the policy of the Federal Government that Federal agencies:

(i) implement cost-effective programs to minimize the procurement of materials and substances that contribute to the depletion of stratospheric ozone; and

(ii) give preference to the procurement of alternative chemicals, products, and manufacturing processes that reduce overall risks to human health and the environment by lessening the depletion of ozone in the upper atmosphere. In implementing this policy, prior to final promulgation of EPA regulations on Federal procurement, Federal agencies shall begin conforming their procurement policies to the general requirements of Title VI of the Clean Air Act Amendments by:

(a) minimizing, where economically practicable, the procurement of products containing or manufactured with Class I substances in anticipation of the phaseout schedule to be promulgated by EPA for Class I substances, and maximizing the use of safe alternatives. In developing their procurement policies, agencies should be aware of the phaseout schedule for Class II substances;

(b) amending existing contracts, to the extent permitted by law and where practicable, to be consistent with the phaseout schedules for Class I substances. In awarding contracts, agencies should be aware of the phaseout schedule for Class II substances in awarding contracts;

(c) implementing policies and practices that recognize the increasingly limited availability of Class I substances as production levels capped by the Montreal Protocol decline until final phaseout. Such practices shall include, but are not limited to:

(i) reducing emissions and recycling ozone-depleting substances;

(ii) ceasing the purchase of nonessential products containing or manufactured with ozone-depleting substances; and

(iii) requiring that new contracts provide that any acquired products containing or manufactured with Class I or Class II substances be labeled in accordance with section 611 of the Clean Air Act Amendments.

Sec. 4. Responsibilities. Not later than 6 months after the effective date of this Executive order, each Federal agency, where feasible, shall have in place practices that, where economically practicable, minimize the procurement of Class I substances. Agencies also shall be aware of the phaseout schedule for Class II substances. Agency practices may include, but are not limited to:

(a) altering existing equipment and/or procedures to make use of safe alternatives;

(b) specifying the use of safe alternatives and of goods and services, where available, that do not require the use of Class I substances in new procurements and that limit the use of Class II substances consistent with section 612 of the Clean Air Act Amendments; and

(c) amending existing contracts, to the extent permitted by law and where practicable, to require the use of safe alternatives.

Sec. 5. Reporting Requirements. Not later than 6 months after the effective date of this Executive order, each Federal agency shall submit to the Office of Management and Budget a report regarding the implementation of this order. The report shall include a certification by each agency that its regulations and procurement practices are being amended to comply with this order.

Sec. 6. Exceptions. Exceptions to compliance with this Executive Order may be made in accordance with section 604 of the Clean Air Act Amendments and with the provisions of the Montreal Protocol.

Sec. 7. Effective Date. This Executive order is effective 30 days after the date of issuance. Although full implementation of this order must await revisions to the Federal Acquisition Regulations ("FAR"), it is expected that Federal agencies will take all appropriate actions in the interim to implement those aspects of the order that are not dependent upon regulatory revision.

Sec. 8. Federal Acquisition Regulatory Councils. Pursuant to section 6(a) of the Office of Federal Procurement Policy Act, as amended, 41 U.S.C. 405(a), the Defense Acquisition Regulatory Council and the Civilian Agency Acquisition Council shall ensure that the policies established herein are incorporated in the FAR within 180 days from the date this order is issued.

Sec. 9. Judicial Review. This order does not create any right or benefit, substantive or procedural, enforceable by a non-Federal party against the United States, its officers or employees, or any other person.

/s/ WILLIAM J. CLINTON
THE WHITE HOUSE
April 21, 1993

Public Law 101-508 - Nov. 5, 1990
Omnibus Budget Reconciliation Act of 1990
(Pollution Prevention Act of 1990)

(References in brackets [] are to title 42, United States Code)

TABLE OF CONTENTS

| | |
|------------|--|
| SEC. 6601. | SHORT TITLE. |
| SEC. 6602. | FINDINGS AND POLICY. |
| SEC. 6603. | DEFINITIONS. |
| SEC. 6604. | EPA ACTIVITIES. |
| SEC. 6605. | GRANTS TO STATES FOR STATE TECHNICAL ASSISTANCE PROGRAMS. |
| SEC. 6606. | SOURCE REDUCTION CLEARINGHOUSE. |
| SEC. 6607. | SOURCE REDUCTION AND RECYCLING DATA COLLECTION. |
| SEC. 6608. | EPA REPORT. |
| SEC. 6609. | SAVINGS PROVISIONS. |
| SEC. 6610. | AUTHORIZATION OF APPROPRIATIONS. |

SEC. 6601. [13101] SHORT TITLE.

This subtitle may be cited as the "Pollution Prevention Act of 1990."

SEC. 6602. [13101] FINDINGS AND POLICY.

(a) FINDINGS. - The Congress finds that:

- (1) The United States of America annually produces millions of tons of pollution and spends tens of billions of dollars per year controlling this pollution.
- (2) There are significant opportunities for industry to reduce or prevent pollution at the source through cost-effective changes in production, operation, and raw materials use. Such changes offer industry substantial savings in reduced raw material, pollution control, and liability costs as well as help protect the environment and reduce risks to worker health and safety.
- (3) The opportunities for source reduction are often not realized because existing regulations, and the industrial resources they require for compliance, focus upon treatment and disposal, rather than source reduction; existing regulations do not emphasize, multi-media management of pollution; and businesses need information and technical assistance to overcome institutional barriers to the adoption of source reduction practices.
- (4) Source reduction is fundamentally different and more desirable than waste management and pollution control. The Environmental Protection Agency needs to address the historical lack of attention to source reduction.
- (5) As a first step in preventing pollution through source reduction, the Environmental Protection Agency must establish a source reduction program which collects and disseminates information, provides financial assistance to States, and implements the other activities provided for in this subtitle.

(b) POLICY. - The Congress hereby declares it to be the national policy of the United States that pollution should be prevented or reduced at the source whenever feasible; pollution that cannot be prevented should be recycled in an environmentally safe manner, whenever feasible; pollution that cannot be prevented or recycled should be treated in an environmentally safe manner whenever feasible; and disposal or other release into the environment should be employed only as a last resort and should be conducted in an environmentally safe manner.

SEC. 6603. [13102] DEFINITIONS.

For purposes of this subtitle-

- (1) The term "Administrator" means the Administrator of the Environmental Protection Agency.
- (2) The term "Agency" means the Environmental Protection Agency.

- (3) The term “toxic chemical” means any substance on the list described in section 313(c) of the Superfund Amendments and Reauthorization Act of 1986.
- (4) The term “release” has the same meaning as provided by section 329(8) of the Superfund Amendments and Reauthorization Act of 1986.
- (5)(A) The term “source reduction” means any practice which-
 - (i) reduces the amount of any hazardous substance, pollutant, or contaminant entering any waste stream or otherwise released into the environment (including fugitive emissions) prior to recycling, treatment, or disposal; and
 - (ii) reduces the hazards to public health and the environment associated with the release of such substances, pollutants, or contaminants.

The term includes equipment or technology modifications, process or procedure modifications, reformulation or redesign of products, substitution of raw materials, and improvements in housekeeping, maintenance, training, or inventory control.

(B) The term “source reduction” does not include any practice which alters the physical, chemical, or biological characteristics or the volume of a hazardous substance, pollutant, or contaminant through a process or activity which itself is not integral to and necessary for the production of a product or the providing of a service.

- (6) The term “multi-media” means water, air, and land.
- (7) The term “SIC codes” refers to the 2-digit code numbers used for classification of economic activity in the Standard Industrial Classification Manual.

SEC. 6604. [13103] EPA ACTIVITIES.

- (a) **AUTHORITIES.** - The Administrator shall establish in the Agency an office to carry out the functions of the Administrator under this subtitle. The office shall be independent of the Agency’s single-medium program offices but shall have the authority to review and advise such offices on their activities to promote a multi-media approach to source reduction. The office shall be under the direction of such officer of the Agency as the Administrator shall designate.
- (b) **FUNCTIONS.** - The Administrator shall develop and implement a strategy to promote source reduction. As part of the strategy, the Administrator shall-
 - (1) establish standard methods of measurement of source reduction;
 - (2) ensure that the Agency considers the effect of its existing and proposed programs on source reduction efforts and shall review regulations of the Agency prior and subsequent to their proposal to determine their effect on source reduction;
 - (3) coordinate source reduction activities in each Agency Office and coordinate with appropriate offices to promote source reduction practices in other Federal agencies, and generic research and development on techniques and processes which have broad applicability;

- (4) develop improved methods of coordinating, streamlining and assuring public access to data collected under Federal environmental statutes;
- (5) facilitate the adoption of source reduction techniques by businesses. This strategy shall include the use of the Source Reduction Clearinghouse and State matching grants provided in this subtitle to foster the exchange of information regarding source reduction techniques, the dissemination of such information to businesses, and the provision of technical assistance to businesses. The strategy shall also consider the capabilities of various businesses to make use of source reduction techniques;
- (6) identify, where appropriate, measurable goals which reflect the policy of this subtitle, the tasks necessary to achieve the goals, dates at which the principal tasks are to be accomplished, required resources, organizational responsibilities, and the means by which progress in meeting the goals will be measured;

ENFLEX INFO Note: Pub.L. 101-508, Title VI, 6604, Nov. 5, 1990, 104 Stat. 1388-322, was enacted without subsec. (b)(7).

- (8) establish an advisory panel of technical experts comprised of representatives from industry, the States, and public interest groups, to advise the Administrator on ways to improve collection and dissemination of data;
- (9) establish a training program on source reduction opportunities, including workshops and guidance documents, for State and Federal permit issuance, enforcement, and inspection officials working within all agency program offices.
- (10) identify and make recommendations to Congress to eliminate barriers to source reduction including the use of incentives and disincentives;
- (11) identify opportunities to use Federal procurement to encourage source reduction;
- (12) develop, test and disseminate model source reduction auditing procedures designed to highlight source reduction opportunities; and
- (13) establish an annual award program to recognize a company or companies which operate outstanding or innovative source reduction programs.

SEC. 6605. [13104] GRANTS TO STATES FOR STATE TECHNICAL ASSISTANCE PROGRAMS.

- (a) **GENERAL AUTHORITY.** - The Administrator shall make matching grants to States for programs to promote the use of source reduction techniques by businesses.
- (b) **CRITERIA.** - When evaluating the requests for grants under this section, the Administrator shall consider, among other things, whether the proposed State program would accomplish the following:
 - (1) Make specific technical assistance available to businesses seeking information about source reduction opportunities, including funding for experts to provide

onsite technical advice to business seeking assistance and to assist in the development of source reduction plans.

- (2) Target assistance to businesses for whom lack of information is an impediment to source reduction.
 - (3) Provide training in source reduction techniques. Such training may be provided through local engineering schools or any other appropriate means.
- (c) **MATCHING FUNDS.** - Federal funds used in any State program under this section shall provide no more than 50 per centum of the funds made available to a State in each year of that State's participation in the program.
- (d) **EFFECTIVENESS.** - The Administrator shall establish appropriate means for measuring the effectiveness of the State grants made under this section in promoting the use of source reduction techniques by businesses.
- (e) **INFORMATION.** - States receiving grants under this section shall make information generated under the grants available to the Administrator.

SEC. 6606. [13105] SOURCE REDUCTION CLEARINGHOUSE.

- (a) **AUTHORITY.** - The Administrator shall establish a Source Reduction Clearinghouse to compile information including a computer data base which contains information on management, technical, and operational approaches to source reduction. The Administrator shall use the clearinghouse to -
- (1) serve as a center for source reduction technology transfer;
 - (2) mount active outreach and education programs by the States to further the adoption of source reduction technologies; and
 - (3) collect and compile information reported by States receiving grants under section 6605 in the operation and success of State source reduction programs.
- (b) **PUBLIC AVAILABILITY.** - The Administrator shall make available to the public such information on source reduction as is gathered pursuant to this subtitle and such other pertinent information and analysis regarding source reduction as may be available to the Administrator. The data base shall permit entry and retrieval of information to any person.

SEC. 6607. [13106] SOURCE REDUCTION AND RECYCLING DATA COLLECTION.

- (a) **REPORTING REQUIREMENTS.** - Each owner or operator of a facility required to file an annual toxic chemical release form under section 313 of the Superfund Amendments and Reauthorization Act of 1986 ("SARA") for any toxic chemical shall include with each such annual filing a toxic chemical source reduction and recycling report for the preceding [70] calendar year. The toxic chemical source reduction and recycling report shall cover each toxic chemical required to be reported in the annual toxic chemical release form filed by the owner or operator under section 313(c) of that Act. This section

shall take effect with the annual report filed under section 313 for the first full calendar year beginning after the enactment of this subtitle.

- (b) **ITEMS INCLUDED IN REPORT.** - The toxic chemical source reduction and recycling report required under subsection (a) shall set forth each of the following on a facility-by-facility basis for each toxic chemical:
- (1) The quantity of the chemical entering any waste stream (or otherwise released into the environment) prior to recycling, treatment, or disposal during the calendar year for which the report is filed and the percentage change from the previous year. The quantity reported shall not include any amount reported under paragraph (7). When actual measurements of the quantity of a toxic chemical entering the waste streams are not readily available, reasonable estimates should be made based on best engineering judgment.
 - (2) The amount of the chemical from the facility which is recycled (at the facility or elsewhere) during such calendar year, the percentage change from the previous year, and the process of recycling used.
 - (3) The source reduction practices used with respect to that chemical during such year at the facility. Such practices shall be reported in accordance with the following categories unless the Administrator finds other categories to be more appropriate:
 - (A) Equipment, technology, process, or procedure modifications.
 - (B) Reformulation or redesign of products.
 - (C) Substitution of raw materials.
 - (D) Improvement in management, training, inventory control, materials handling, or other general operational phases of industrial facilities.
 - (4) The amount expected to be reported under paragraph (1) and (2) for the two calendar years immediately following the calendar year for which the report is filed. Such amount shall be expressed as a percentage change from the amount reported in paragraphs (1) and (2).
 - (5) A ratio of production in the reporting year to production in the previous year. The ratio should be calculated to most closely reflect all activities involving the toxic chemical. In specific industrial classifications subject to this section, where a feedstock or some variable other than production is the primary influence on waste characteristics or volumes, the report may provide an index based on that primary variable for each toxic chemical. The Administrator is encouraged to develop production indexes to accommodate individual industries for use on a voluntary basis.
 - (6) The techniques which were used to identify source reduction opportunities. Techniques listed should include, but are not limited to, employee recommendations, external and internal audits, participative team management, and material balance audits. Each type of source reduction listed under paragraph

- (3) should be associated with the techniques or multiples of techniques used to identify the source reduction technique.
- (7) The amount of any toxic chemical released into the environment which resulted from a catastrophic event, remedial action, or other one-time event, and is not associated with production processes during the reporting year.
- (8) The amount of the chemical from the facility which is treated (at the facility or elsewhere) during such calendar year and the percentage change from the previous year. For the first year of reporting under this subsection, comparison with the previous year is required only to the extent such information is available.
- (c) **SARA PROVISIONS.** - The provisions of sections 322, 325(c), and 326 of the Superfund Amendments and Reauthorization Act of 1986 shall apply to the reporting requirements of this section in the same manner as to the reports required under section 313 of that Act. The Administrator may modify the form required for purposes of reporting information under section 313 of that Act to the extent he deems necessary to include the additional information required under this section.
- (d) **ADDITIONAL OPTIONAL INFORMATION.** - Any person filing a report under this section for any year may include with the report additional information regarding source reduction, recycling, and other pollution control techniques in earlier years.
- (e) **AVAILABILITY OF DATA.** - Subject to section 322 of the Superfund Amendments and Reauthorization Act of 1986, the Administrator shall make data collected under this section publicly available in the same manner as the data collected under section 313 of the Superfund Amendments and Reauthorization Act of 1986.

SEC. 6608. [13107] EPA REPORT.

- (a) **BIENNIAL REPORTS.** - The Administrator shall provide Congress with a report within eighteen months after enactment of this subtitle and biennially thereafter, containing a detailed description of the actions taken to implement the strategy to promote source reduction developed under section 4(b) and of the results of such actions. The report shall include an assessment of the effectiveness of the clearinghouse and grant program established under this subtitle in promoting the goals of the strategy, and shall evaluate data gaps and data duplication with respect to data collected under Federal environmental statutes.
- (b) **SUBSEQUENT REPORTS.** - Each biennial report submitted under subsection (a) after the first report shall contain each of the following:
- (1) An analysis of the data collected under section 6607 on an industry-by-industry basis for not less than five SIC codes or other categories as the Administrator deems appropriate. The analysis shall begin with those SIC codes or other categories of facilities which generate the largest quantities of toxic chemical waste. The analysis shall include an evaluation of trends in source reduction by industry, firm size, production, or other useful means. Each such subsequent

report shall cover five SIC codes or other categories which were not covered in a prior report until all SIC codes or other categories have been covered.

- (2) An analysis of the usefulness and validity of the data collected under section 6607 for measuring trends in source reduction and the adoption of source reduction by business.
- (3) Identification of regulatory and nonregulatory barriers to source reduction, and of opportunities for using existing regulatory programs, and incentives and disincentives to promote and assist source reduction.
- (4) Identification of industries and pollutants that require priority assistance in multi-media source reduction [71]
- (5) Recommendations as to incentives needed to encourage investment and research and development in source reduction.
- (6) Identification of opportunities and development of priorities for research and development in source reduction methods and techniques.
- (7) An evaluation of the cost and technical feasibility, by industry and processes, of source reduction opportunities and current activities and an identification of any industries for which there are significant barriers to source reduction with an analysis of the basis of this identification.
- (8) An evaluation of methods of coordinating, streamlining, and improving public access to data collected under Federal environmental statutes.
- (9) An evaluation of data gaps and data duplication with respect to data collected under Federal environmental statutes. In the report following the first biennial report provided for under this subsection, paragraphs (3) through (9) may be included at the discretion of the Administrator.

SEC. 6609. [13108] SAVINGS PROVISIONS.

- (a) Nothing in this subtitle shall be construed to modify or interfere with the implementation of title III of the Superfund Amendments and Reauthorization Act of 1986.
- (b) Nothing contained in this subtitle shall be construed, interpreted or applied to supplant, displace, preempt or otherwise diminish the responsibilities and liabilities under other State or Federal law, whether statutory or common.

SEC. 6610. [13109] AUTHORIZATION OF APPROPRIATIONS.

There is authorized to be appropriated to the Administrator \$8,000,000 for each of the fiscal years 1991, 1992 and 1993 for functions carried out under this subtitle (other than State Grants), and \$8,000,000 for each of the fiscal years 1991, 1992 and 1993, for grant programs to States issued pursuant to section 6605.

Civil Engineering

ENVIRONMENTAL QUALITY

1.1. Achieving and maintaining environmental quality is an essential part of the Air Force mission. The Air Force is committed to: cleaning up environmental damage resulting from its past activities; meeting all environmental standards applicable to its present operations; planning its future activities to minimize environmental impacts; managing responsibly the irreplaceable natural and cultural resources it holds in public trust; and eliminating pollution from its activities wherever possible. This directive establishes policies to carry out this commitment. Revised material is indicated by a .

1.2. The Air Force will conduct its activities according to national environmental policy. Commanders at all levels are responsible for full compliance with national and Air Force environmental policy. All Air Force employees, including military, civilian, and contractor personnel, are accountable for the environmental consequences of their actions.

1.3. An Air Force Environmental Quality Program will be developed and implemented. This program will be composed of four pillars: cleanup, compliance, conservation, and pollution prevention.

1.3.1. Cleanup. The Air Force will reduce health and environmental risks created or caused by past operations. At each installation, the Air Force will move as rapidly as possible to identify, characterize, and clean up contamination. The Air Force will ensure open, unbiased, and comprehensive processes for cost-effective cleanup and protection of human health and public well-being by involving the public and regulatory agencies in the clean-up activities. At locations in foreign countries, the Air Force will restore sites contaminated by Air Force activities to sustain current operations and eliminate known imminent and substantial dangers to human health and safety.

1.3.2. Compliance. The Air Force will comply with applicable Federal, State, and local environmental laws and standards. Air Force activities in foreign countries will comply with the Department of Defense (DoD) Final Governing Standards, or in their absence, the environmental criteria of the DoD Overseas Environmental Baseline Guidance Document. Air Force deployment plans will identify the necessary resources and assign specific responsibilities to comply with applicable standards. Consistent with security requirements, the Air Force will support environmental compliance inspections of its operations and activities worldwide, and will aggressively correct areas not in compliance.

1.3.3. Conservation. The Air Force will conserve natural and cultural resources through effective environmental planning. The environmental consequences of proposed actions and reasonable alternatives will be integrated into all levels of decision making. The environmental resources under Air Force stewardship will be protected and managed in the public interest. Environmental opportunities and constraints will be the foundation of comprehensive plans for installation development.

1.3.4. Pollution Prevention. The Air Force will prevent future pollution by reducing use of hazardous materials and releases of pollutants into the environment to as near zero as feasible. This will be done first through source reduction, e.g. chemical substitution, process change and other techniques. Where environmentally damaging materials must be used, their use will be minimized. When the use of hazardous materials cannot be avoided, the spent material and waste will be reused or recycled whenever possible. When spent material and waste cannot be reused or recycled, dispose of the spent material and waste as a last resort in an environmentally safe manner, consistent with the requirements of all applicable laws. Environmental costs will be accounted for in computing hazardous material life-cycle costs.

1.4. The Air Force will seek sufficient funding to carry out all environmental activities needed to meet its legal obligations. All funds appropriated by the Congress for these activities will be administered responsibly.

1.5. This directive establishes the following authorities and responsibilities:

1.5.1. The Assistant Secretary of the Air Force for Manpower, Reserve Affairs, Installations and Environment (SAF/MI) is responsible for environmental protection policy matters as described in AFPD 90-1, Strategic Planning and Policy Formulation, paragraph 1.5.2.

1.5.2. The Civil Engineer (HQ USAF/CE) formulates policy, oversees its execution, and issues essential guidance.

1.5.3. The Air Force Center for Environmental Excellence and the Air Force Civil Engineering Support Agency provide technical and contracting support to implement these policies.

1.5.4. The National Guard Bureau and Headquarters Air Force Reserve advocate and oversee their environmental protection program, reporting to HQ USAF/CE or SAF/MI as appropriate.

1.5.5. Commanders of major commands (MAJCOM) and lower echelons develop and execute programs to comply with these policies.

1.6. See attachment 1 for the measures of compliance.

1.7. See attachment 2 for terms used in this directive.

1.8. See attachment 3 for the directives and laws associated with this directive.

1.9. See attachment 4 for publications that interface with this directive.

/s/ JAMES E. McCARTHY, Maj General, USAF
The Civil Engineer

4 Attachments

1. Measuring Compliance With This Policy
2. Terms Explained
3. Directives and Laws Implemented by This Policy
4. Related Publications

MEASURING COMPLIANCE WITH THIS POLICY

A1.1. Compliance with this policy will be measured at each base and reported through the MAJCOM to the Headquarters US Air Force Civil Engineer Directorate of Environmental Quality on the Work Information Management System--Environmental Subsystem as prescribed in AFI 32-7002, Environmental Information Management System and AFI 32-7006, Environmental Program in Foreign Countries.

A1.2. Cleanup. For locations in the United States, its territories, and possessions, adherence to the cleanup policy will be assessed by measuring the percentage of sites in the high risk, medium risk, low risk, or no further action planned categories (figure A1.1).

A1.3. Environmental Compliance. Adherence to the environmental compliance policy will be assessed by measuring the current total number of open enforcement actions (figure A1.2).

A1.4. Conservation. Adherence to the conservation policy will be assessed by measuring the percentage of installations that have updated complete comprehensive plans (figure A1.3). A complete comprehensive plan includes (1) environmental constraints such as natural and cultural resource areas and installation restoration program sites, (2) existing infrastructure such as mainline utilities, roads, and facilities, (3) a land use plan for future development, and (4) a capital improvements plan.

A1.5. Pollution Prevention. Adherence to the pollution prevention policy will be assessed by measuring the amount of hazardous wastes (figure A1.4) and solid wastes (figure A1.5) sent off installation to disposal, and those numbers compared to the respective values for the baseline year (CY 92).

Figure A1.1. Sample Metric of Site Risk Reduction Trend.

Figure A1.2. Sample Metric of Open Enforcement Action Trend.

Figure A1.3. Sample Metric of Comprehensive Plan Preparation Trend.

Figure A1.4. Sample Metric of Hazardous Waste Disposal Trend.

Figure A1.5. Sample Metric of Solid Waste Disposal Trend.

TERMS EXPLAINED

Department of Defense (DoD) Final Governing Standards. Country-specific substantive provisions, typically technical limitations on effluent, discharges, etc., or a specific management practice, with

which DoD components must comply (see DoD Directive 6050.16, DoD Policy for Establishing and Implementing Environmental Standards at Overseas Installations).

Enforcement Action. A written notice from a Federal, state, or local regulatory authority citing violations of environmental statutes or regulations. This includes warning letters as determined by the Regional Compliance Office. In foreign countries, an enforcement action is a written notice from a host nation regulatory authority; however, the cited conditions must also be out of compliance with the DoD Final Governing Standards (or Overseas Environmental Baseline Guidance Document), or identify contamination posing an imminent and substantial endangerment to human health and safety.

Overseas Environmental Baseline Guidance Document. Implementation guidance, procedures and criteria for environmental compliance at DoD installations in foreign countries. This document is used to develop Final Governing Standards and, in the case where no Final Governing Standards exist, provides the compliance criteria for use by the Air Force.

DIRECTIVES AND LAWS IMPLEMENTED BY THIS POLICY

A3.1. This directive implements statutes and international protocols, as currently amended, including:

Clean Air Act (July 14, 1955).

Clean Water Act (October 18, 1972).

Comprehensive Environment Response Compensation and Liability Act of 1980 (December 11, 1980).

Emergency Planning and Community Right-to-Know Act of 1986 (October 17, 1986).

Endangered Species Act (November 10, 1978).

Federal Facilities Compliance Act of 1992 (October 6, 1992).

Montreal Protocol of Substances That Deplete the Ozone Layer (September 1987).

National Defense Authorization Act for FY 1993 (October 1, 1992).

National Environmental Policy Act of 1969 (January 1, 1970).

National Historic Preservation Act (October 15, 1966).

Oil Pollution Act of 1990 (August 18, 1990).

Pollution Prevention Act of 1990 (November 5, 1990).

Public Law 97-214, 10 U.S.C. Section 2577, Disposal of Recyclable Materials (July 12, 1982).

Resource Conservation and Recovery Act (October 21, 1976).

Safe Drinking Water Act (December 16, 1974).

Sikes Act (December 31, 1982).

Superfund Amendments and Reauthorization Act of 1986 (October 17, 1986).

Toxic Substance Control Act (October 11, 1976).

Water Quality Act of 1987 (February 4, 1987).

A3.2. This directive implements the following Executive Orders as currently amended:

| Executive Order | Title | Date |
|------------------------|--|--------------|
| 11593 | Protection and Enhancement of the Cultural Environment | May 13, 1971 |
| 11988 | Flood Plain Management | May 24, 1977 |
| 11990 | Protection of Wetlands | May 24, 1977 |
| 12088 | Federal Compliance With Pollution Control Standards | Oct 13, 1978 |
| 12114 | Environmental Effects Abroad of | Jan 4, 1979 |

Major Federal Actions

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|-------|---|--------------|
| 12580 | Superfund Implementation | Jul 23, 1987 |
| 12777 | Implementation of the Federal Water Pollution Control Act and Oil Pollution Control Act | Oct 18, 1991 |
| 12856 | Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements | Aug 4, 1993 |
| 12873 | Federal Acquisition, Recycling, and Waste Prevention | Oct 20, 1993 |
| 12902 | Energy Efficient and Water Conservation at Federal Facilities | Mar 8, 1994 |

A3.3. This directive implements DoD publications including:

| Publication Number | Publication Title | Date |
|---------------------------|---|--------------|
| DoD Inst 4120.14 | Environmental Pollution Prevention, Control and Abatement | Aug 30, 1977 |
| DoD Inst 4165.57 | Air Installation Compatible | Nov 8, 1977 |

With Change 1 Use Zones

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| DoD Inst 4165.59 | DoD Implementation of the Coastal Zone Management Program | Dec 29,1975 |
| DoD Dir 4165.60 | Solid Waste Mngmnt Collection, Disposal, Resource Recovery and Recycling Program | Oct 4, 1976 |
| DoD Dir 4210.15 | Hazardous Materials Pollution Prevention | Jul 27, 1989 |
| DoD Inst 4700.2 | Secretary of Defense Awards for Natural Resources and Environmental Management | Jul 15, 1988 |
| DoD Dir 4700.4 | Natural Resource Management Program | Jan 24, 1989 |
| DoD Dir 4710.1 | Archaeological and Historical Resources Management | Jun 21, 1984 |
| DoD Dir 5030.41 | Oil and Hazardous Substances With Change 1 Pollution Prevention and Contingency Program | Jun 1, 1977 |
| DoD Dir 5100.50 | Protection and Enhancement of With Changes 1 & 2 Environmental Quality | May 24, 1973 |
| DoD Dir 6050.1 | Environmental Effects in the United States of DoD Actions | Jul 30, 1979 |
| DoD Dir 6050.7 | Environmental Effects Abroad of Major Department of Defense Actions | Mar 31, 1979 |
| DoD Dir 6050.8 | Storage and Disposal of Non-DoD Owned Hazardous or Toxic Materials on DoD Installations | Feb 27, 1986 |
| DoD Dir 6050.9 | Chlorofluorocarbons (CFCs) and Halons | Feb 13, 1989 |
| DoD Dir 6050.16 | DoD Policy for Establishing and | Sep 20, 1991 |

Implementing Environmental
Standards at Overseas Installations

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|-----------------|--|--------------|
| DoD Dir 6230.1 | Safe Drinking Water | Apr 24, 1978 |
| DoD Inst 7310.1 | Disposition of Proceeds from DoD Sales of Surplus Personal Property | Jul 10 1989 |

RELATED PUBLICATIONS

A4.1. This directive interfaces with the following Air Force instructions:

| Publication Number | Publication Title | Former Publication |
|---------------------------|--|---------------------------|
| AFI 32-7001 | Environmental Budgeting | No Former Pub |
| AFI 32-7002 | Environmental Information Management System | No Former Pub |
| AFI 32-7005 | Environmental Protection Committees | AFR 19-8 |
| AFI 32-7006 | Environmental Program in Foreign Countries | No Former Pub |
| AFI 48-119 | Medical Service Environmental Quality Programs | No Former Pub |
| AFI 63-118 | Civil Engineer Research, Development, and Acquisition | No Former Pub |
| Cleanup | | |
| AFI 32-7020 | Environmental Restoration Program Program | No Former Pub |
| Compliance | | |
| AFI 32-4002 | Hazardous Material Emergency Planning and Response Compliance Emergency Planning and | AFR 19-8, AFR 355-1 |

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|-------------|--|-----------------------|
| AFI 32-7040 | Air Quality Compliance | AFP 19-5 |
| AFI 32-7041 | Water Quality Compliance | AFP 19-5 |
| AFI 32-7042 | Solid and Hazardous Waste Compliance | AFP 19-5 AFR 19-11 |
| AFI 32-7044 | Storage Tank Compliance | No Former Pub |
| AFI 32-7045 | Environmental Compliance Assessment and Management Program | AFR 19-16 |
| AFI 32-7047 | Compliance Tracking and Reporting | No Former Pub |

Conservation

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|-------------|---|-----------------------|
| AFI 32-7060 | Interagency Intergovernmental Coordination for Environmental Planning | AFR 19-9 |
| AFI 32-7061 | Environmental Impact Analysis Process | AFR 19-2, AFR 19-3 |
| AFI 32-7062 | Base Comprehensive Planning | AFR 86-4 |
| AFI 32-7063 | Air Installation Compatible Use Zone Program | AFR 19-9 |
| AFI 32-7064 | Natural Resources Management | AFR 126-1 |
| AFI 32-7065 | Cultural Resources Management | AFR 126-7 |
| AFI 32-7066 | Environmental Baseline Surveys for Real Estate Transactions | No Former Pub |

Pollution Prevention

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| AFI 32-7080 | Pollution Prevention Program | AFR 19-15 |
|-------------|------------------------------|-----------|

Civil Engineering

PEST MANAGEMENT PROGRAM

This instruction implements AFD 32-10, Installations and Facilities, and Department of Defense (DoD) Directive 4150.7, DoD Pest Management Program, October 24, 1983. It provides guidance for pest management at Air Force installations.

SUMMARY OF CHANGES

This is the initial publication of AFI 32-1053, substantially revising AFR 91-21. It updates, clarifies, and streamlines previous guidance on pest management and more fully emphasizes environmental impact. It makes AF Form 290, DD Form 1080, and DD Form 1224 obsolete.

1. Program Objective, Definitions, and Methods:

1.1. Program Objective. It is DoD policy to conduct effective pest management programs. This instruction gives responsibilities and procedures for pest management at Air Force installations and other operating locations. Provisions in this instruction are consistent with pertinent Environmental Protection Agency (EPA), Occupational Safety and Health Administration (OSHA), and Air Force Occupational Safety and Health (AFOSH) standards.

1.2. Definitions:

1.2.1. Pest Management. The effective, economical, and environmentally sound prevention or control of animal pests and vectors, undesirable terrestrial and aquatic plants, and plant diseases. It includes such methods as:

- Education.
- Inspection (surveys).
- Sanitation and proper waste management (such as use of pressure washing and self-closing compactors).
- Proper storage of food and other pest-susceptible items.
- Exclusion, trapping, and other mechanical or physical means of containing pests (such as using portable vacuum cleaners).
- Pest preventive building construction and maintenance (caulking).
- Biological control.
- Minimal use of pesticidal chemicals in a manner (such as containerized baits and crack and crevice applications) that causes the least harm to the environment.

1.2.2. Pest. A plant or animal out of place.

1.2.3. Vector. An arthropod or other organism that transmits a disease agent to another organism.

2. Responsibilities:

2.1. Headquarters United States Air Force/Civil Engineer (HQ USAF/CE). Approves Air Force pest management policy. (National Guard Bureau/Civil Engineer [NGB/CE] approves Air National Guard [ANG] pest management policy.)

2.2. Headquarters Air Force Civil Engineer Support Agency's (HQ AFCESA) Pest Management Program Coordinator:

- Sets standards, develops procedures, and provides technical assistance to implement Air Force pest management policy and programs.
- Coordinates with engineering and medical services to ensure that the Air Force has adequate combat pest management capability, including deployment of medical entomology and pest management teams.
- Develops and maintains a computerized work information management system (WIMS) for Air Force pest management programs.
- Establishes the Air Force self-help pest management program.
- Coordinates with Headquarters Air Force Medical Operations Agency/Surgeon General Professional Affairs and Quality Assurance (HQ AFMOA/SGPA) on aspects of the pest management program that present potential health or environmental contamination hazards.

NOTE: ANGRC/CEVP provides comparable services for ANG installations.

2.3. Major Commands (MAJCOM)

- Implement pest management policies and programs for their installations.
- Use the Environmental Compliance Assessment and Management Program Pesticide Management Checklist and applicable sections of Armed Forces Pest Management Board Technical Information Memorandum No. 18, Installation Pest Management Program Guide, to help assess the effectiveness of installation pest management programs.

NOTE: All Armed Forces pest management documents to which this AFI refers are available from the Armed Forces Pest Management Board, Forest Glen Section, Walter Reed Army Medical Center, Washington DC 20307-5001.

- Certify only military and civilian pest management personnel who have met the requirements (in-residence training, correspondence course, and OJT) for certification training as specified in the Armed Forces Pest Management Board document, DoD Plan for Certification of Pesticide Applicators.
- Provide all certified pest management personnel with DD Form 1826, Certificate of Competency, and a DD Form 1826-1, Pesticide Applicator, that are valid for 3 years from certification date, unless revoked for cause.
- Help installations to implement the Air Force WIMS computerized pesticide data base, and at least quarterly (within 30 days of the end of the quarter), forward to HQ AFCESA Airfield Support Division (DMP) the consolidated pesticide applicator certification, inventory, and application data by computer. If the installation doesn't yet have WIMS, report using DD Form 1532, Pest Management Report.

2.4. The Air Force Installation Pest Control Supervisor:

2.4.1. This person works for the Base Civil Engineer (BCE) and is responsible for the installation's pest management program. As overall responsibilities:

- Works closely with other BCE, Services, and medical personnel, and the MAJCOM to produce an effective pest management program.
- Coordinates with EPA, state, local, or host nation pest management and environmental personnel as necessary.

2.4.2. For regulatory compliance:

- Makes sure pest management programs and facilities comply with all applicable Federal, state, and local laws; DoD directives; and Air Force requirements.
- Reviews the most recent Environmental Compliance Assessment and Management Program Pesticide Management Checklist for guidance in this area.
- For overseas installations outside US jurisdiction, applies the final governing standards as developed under DoD Directive 6050.16, DoD Policy for Establishing and Implementing Environmental Standards at Overseas Installations, September 20, 1991.
- Follows guidance in Military Handbook 1028/8A, Design of Pest Management Facilities, in designing new facilities or renovating existing facilities.

2.4.3. For personnel management:

- Makes sure that only certified personnel (or their direct subordinates that are within line of sight) apply restricted-use pesticides or state-limited use pesticides.
- Allows uncertified but trained pest management personnel to apply general-use pesticides when supervised by certified personnel.
- Assigns the appropriate number of certified pest management personnel according to guidance in DoD Directive 4150.7.
- Oversees the training and certification of peacetime and wartime pest management personnel (DoD and nonappropriated funded) according to the Armed Forces Pest Management Board document, DoD Plan for the Certification of Pesticide Applicators.
- Identifies personnel needing certification or recertification during the annual training survey.
- Schedules certification and recertification training available from DoD schools using information in the Armed Forces Pest Management Board's most recent Technical Information Bulletin.
- Sends requests for certification or recertification, based on successful completion of training, to the MAJCOM.

NOTE: The losing MAJCOM will recertify permanent change-of-station personnel before their departure if the certification expires 6 months before or after their departure date.

- May not assign prisoners or volunteer workers to apply pesticides
- After receiving training from pest management personnel, non-pest management personnel may apply pesticides in the following situations:
 - Adult military housing occupants and facility building managers may apply approved self-help pesticides.
 - Military personnel may apply approved arthropod repellents (aerosol, creme, lotion, stick).

- Military personnel may apply approved aerosol insecticide for quarantine insect extermination on aircraft.

2.4.4. For preventing the spread of pests:

- Takes measures to prevent the movement of pests and disease vectors requiring quarantine in accordance with the following, as appropriate:
 - AFI 48-104, Medical and Agricultural Foreign and Domestic Quarantine Regulations for Vessels, Aircraft and Other Transports of the Armed Forces (formerly AFR 161-4) (Joint Departmental Publication).
 - AFPD 24-4, Customs and Border Clearance (formerly AFR 75-12).
 - AFI 24-401, Customs--Europe.
 - AFI 24-402, Customs--Pacific.
 - AFI 24-403, Customs--Southern.
 - AFI 24-104, Customs--Domestic.

NOTE: AFIs 24-401 through 24-404 replace AFRs 75-12 and 400-21.

- Inspects at the overseas point of origin any retrograde cargo shipments after contingencies or other deployments to ensure that the cargo is pest-free.

NOTE: US Department of Agriculture and US Customs personnel provide critical assistance on retrograde pest prevention procedures.

- Disinfects aircraft using MAJCOM guidance and DoD Foreign Clearance Guides.
- Coordinates with state agencies on cooperative agreements for managing undesirable plants on Air Force lands when state or private lands in the same area have such programs.

2.4.5. For the installation pest management plan:

- Makes sure the plan addresses annual requirements, such as labor and pest management measures to be used against each pest.
- Includes necessary attachments such as pesticide labels, material safety data sheets, and agreements between appropriate state pesticide organizations and DoD.

NOTE: Include any other unique pest management programs in this plan.

- Base the planned pest management operations on appropriate surveillance data.
- If endangered species are present, coordinates the plan with the regional US Fish and Wildlife Service Office.
- Ensures that the plan complies with applicable EPA requirements, the Resource Conservation and Recovery Act, the Endangered Species Act, and other pertinent environmental directives by coordinating with:
 - The installation environmental coordinator.
 - The installation natural resources manager (if assigned).
 - The military public health officer.
 - The bioenvironmental engineer officer.

- Follows the guidance in Section II of Armed Forces Pest Management Board Technical Information Memorandum No. 18 in preparing this plan.
- Asks the MAJCOM to approve the plan.

2.4.6. For contingency pesticide stocks:

- Maintains, as a minimum, contingency pesticides and pest management equipment listed in AFI 10-210, Prime BEEF Program (formerly AFR 93-3), and in tables of allowance for Harvest Bare, Eagle, and Falcon fly away kits.
- Stores contingency pesticides under the same controlled temperature, security, and other conditions as daily use pesticides.
- Rotates contingency pesticide stocks back to pest management shop inventories and replaces them with fresh chemicals annually.
- Ensures that all deploying personnel have insect repellents and permethrin-treated clothing for protection against insect vectors.
- Coordinates with the medical intelligence officer to assess the health risks from insect vectors.
- Ensures that all deploying individuals are trained to use personal protective measures against the pests they are likely to encounter.

2.4.7. For destructive pests:

- Monitors pests that damage or destroy property and documents the problem in WIMS.
- Includes termite inspection frequency in installation pest management plans.

2.4.8. For facility maintenance,

- Operates a self-help pest management program for military housing occupants or helps the self-help store manager to perform this function following guidance from HQ AFCESA.
- Works with facility managers and occupants of buildings other than military family housing to control minor pests through good housekeeping (see paragraph 3.3).

2.4.9. For protecting the health of personnel:

- Makes sure all BCE personnel who apply pesticides receive periodic occupational physical exams (including cholinesterase testing if working regularly with organophosphate or carbamate pesticides) at a frequency determined by the local Aeromedical Council.
- Ensures that all such personnel receive a baseline physical examination and interview by military public health within 30 days after they arrive.
- Protects the health and safety of pest management personnel through training, emphasis on good work habits (such as using protective clothing and equipment), and construction that reduces or eliminates hazards.
- Provides protective clothing and equipment to all pest management persons who mix and apply pesticides (see paragraph 3.4).

2.4.10. For safety:

- Gives the fire department a hard copy of installation pesticide inventories quarterly.
- Notifies the military public health staff before starting any fumigation work.
- Removes dead and stray animals in cooperation with pest management, natural resources, security police, and veterinary or military public health personnel.
- Coordinates all fumigations with installation medical, fire, security police, and safety personnel.

- Doesn't use internal combustion or electrical power-driven spraying machines for aerosol or mist sprays inside buildings without approval from the bioenvironmental engineer and the installation fire chief.

2.4.11. For environmental protection:

- Uses recyclable and refillable pesticide containers and closed pesticide mixing and transfer systems as much as possible.
- Doesn't inject insecticides into the soil to control subterranean termites in any military buildings with sub-slab or in-slab heating, ventilation, or air conditioning ducts, unless personnel first turn the systems off and block them.

2.4.12. Coordinates with the Bioenvironmental Engineer

- Enrolling pesticide applicators into the respiratory protection program.
- Making sure that bioenvironmental engineering receives:
 - A hard copy of installation pesticide inventories.
 - Quarterly summary of pesticide application records.
 - Pertinent material safety data sheets.
- Notifying military public health before applying pesticides in food preparation and consumption facilities, medical facilities, and child development centers.

2.4.13 For records:

- Obtains necessary computer hardware and uses the WIMS pesticide software to track pesticide inventories and pesticide applicator certifications.
- Records daily pesticide use on the WIMS pesticide software or on DD Forms 1532 and 1532-1, Pest Management Maintenance Record, if WIMS isn't on-line.
- Keeps historical data on pesticide application in accordance with AFMAN 37-139, Record Disposition--Standards (formerly AFR 4-20, volume 2).

2.4.14. For quarterly reports (sent by 15 days after close of quarter to the MAJCOM or ANGR/CEVP for ANG installations), includes:

- Pesticide inventory data.
- Pesticide applicator certification data.
- Pesticide application data (equivalent of RCS DD-P&L[A&AR]1080) for all pest management operations on Air Force real property:
- Pest management shop.
- Self-help pest control.
- Roads and grounds.
- Golf course.
- Contractors.
- Forestry.
- Lessee and land permit holders.

2.4.15. For getting help from other Air Force agencies:

- Requests assistance on airfield wildlife control problems, through the MAJCOM, from the Bird Aircraft Strike Hazard (BASH) team personnel at Headquarters Air Force Safety Agency Flight

Safety Wildlife (AFSA/SEFW), 9700 Avenue G, Suite 279A, Building 24499, Kirtland AFB NM 87117-5671. (ANG personnel request assistance from BASH personnel at ANGRC/CEVP.)

- Requests help from 910 Airlift Group/Director Operations Spray (AG/DOS) for aerial dispersal of pesticides when ground-based pest management measures fail, are not practical, or are not feasible from a safety viewpoint.

NOTE: This Air Force Reserve unit maintains and uses a large-area, fixed wing aerial application capability to safely control vectors and pests in combat areas and on DoD installations. When planning aerial pesticide dispersal operations, contact the 910 AG/DOS Entomologist, 3976 King Graves Rd, ARS OH 44473-0910.

2.5. The Military Public Health Officer:

- Determines the type, source, and prevalence of vectors and medical nuisance pests, such as biting mosquitoes, that affect the health and efficiency of personnel.
- Recommends preventive and control measures and monitors the effectiveness of BCE pest management efforts.
- Reports to BCE pest management personnel the total hours pests of possible medical importance were surveyed by them so BCE can submit the data to the MAJCOM in the quarterly WIMS report.
- Schedules occupational physical examinations, including baseline exams before pesticide exposure, for all BCE and golf course personnel who apply pesticides.
- Provides HAZCOM training to pest management personnel.

2.6. Bioenvironmental Engineer

- Evaluates industrial hygiene through periodic shop visits.
- Sets local standards for obtaining and using personal protective equipment for pest management personnel.
- Trains all pest management personnel in testing the fit of respiratory protection equipment.
- Makes sure that medical treatment facilities personnel neither store or use pesticides except disinfectants and germicides.

3. Procedures:

3.1. Cooperating with Civilian Pest Management Projects:

3.1.1. When the Air Force and a civilian community have a common pest management problem, the Air Force involvement should be proportionate to the military interest.

3.1.2. When pest management work, including aerial spray, is solely for the benefit of persons, communities, states, or other Federal agencies in the United States a request from the appropriate Federal agency must go through DoD channels.

3.1.3. In overseas areas, give comparable assistance upon a request by the appropriate host nation authorities. Get Department of State approval per DoD Directive 5100.16, Foreign Disaster Relief, December 4, 1975.

3.2. Identifying Pests:

3.2.1. If you need to identify insects, ticks, rodents, and other pests or vectors, ask one of the units listed in AFI 48-102, Medical Entomology Program (formerly AFR 161-1) and AFI 48-129, Joint Utilization of Certain Armed Forces Medical Laboratory Facilities (formerly AFR 161-40) (Joint Departmental Publication), or another appropriate DoD or civilian agencies.

3.2.2. In the United States, send specimens to Armstrong Laboratory/Occupational and Environmental Medical Biology (AL/OEMB), 2402 East Drive, Brooks AFB TX 78235-5114.

3.2.3. Pacific Air Forces (PACAF) installations submit specimens to Detachment 3, Armstrong Laboratory/Environmental Consulting Branch (AL/ECB), Unit 5213, APO AP 96368-5213.

3.2.4. European installations submit specimens to Headquarters United States Air Forces Europe/Readiness Support Directorate, Operations Division (HQ USAFE/RSIOOF), Unit 3050, Box 10, APO AE 09094-5010.

3.3. Good Housekeeping Practices for Housing. The pest control supervisor, facility managers, and building occupants cooperate on pest management practices to keep pests under control without using pesticides. Such practices include:

- Inspecting buildings.
- Implementing proper sanitation.
- Eliminating pest harborage.
- Excluding pests.
- Storing food properly.
- Performing minor building maintenance.
- Cooperating in scheduling work.
- Arranging and protecting building contents before pest management jobs start.
- Rearranging furnishings after pest control operations.

3.4. Protective Clothing. Protective clothing and equipment for personnel who mix and apply pesticide include:

- Coveralls.
- Respirators
- Goggles.
- Nitrile or chemical- and oil-resistant rubber gloves.
- Rubber boots.
- Safety shoes.
- Special fumigation safety equipment.

3.4.1. Keep overalls clean at all times. To prevent pesticide contamination of other clothing, use shop washing machines and dryers or clearly identify any clothing sent to base laundry services.

3.4.2. Properly dispose of any clothing that is heavily contaminated by pesticides.

3.4.3. Pest management supervisors keep the current copy of AFOSH Standard 161-1, Respiratory Protection Program, in the shop and should be familiar with its contents.

3.5. Managing Pesticides and Equipment:

3.5.1. BCE and golf course pest management personnel obtain pesticides and equipment, except as provided by service contracts, through Air Force supply channels.

3.5.2. Pest management personnel:

- Order standard pesticide application equipment from Federal supply catalogues.
- Use pesticides from Federal listings approved by Armed Forces Pest Management Board and the preapproved WIMS Air Force master inventory.
- Request and receive approval from the MAJCOM (for ANG, contact ANGRC/CEVP) before ordering or using nonstandard, locally purchased pesticides or application equipment.

3.5.3. To make sure no one buys or issues nonapproved pesticides, use advice code 2B on the ordering documents to tell supply that it may not substitute another product for the requested item.

3.5.4. Pest management personnel use all pesticides according to label directions and use equipment according to the manufacturer's instructions.

3.5.5. The pest control supervisor, in coordination with the director of medical services staff and the base environmental coordinator, disposes of all pesticides or pesticide containers that have deteriorated or can't go back to depot stocks. The Defense Reutilization and Marketing Office processes excess stocks of pesticides for turn-in and disposal according to current environmental policy guidance.

3.6. Managing Pest Control Vehicles:

3.6.1. Only pest management personnel may use pest control vehicles.

3.6.2. Paint pest management vehicles with a chemical resistant coating (similar to fire department vehicles) and equip them with plastic bed liners.

3.6.3. Equip vehicles with locking compartments to ensure the safe handling, storage, and transport of pesticides and other chemicals. A telephone maintenance truck (NSN 2320-00-801-9193) will suit the purpose.

3.6.4. The truck must carry emergency phone numbers in case of spills or chemical exposures and carry a spill cleanup kit.

3.6.5. Attach placards to trailer-mounted sprayers identifying the pesticide that you are applying.

3.6.6. Keep all pesticide dispersal equipment in the BCE pest management section.

EXCEPTION: Equipment at base golf courses that have certified pesticide applicators.

3.6.7. Make sure that all prime movers used for fogging, misting, dusting, and ultra-low volume application are air-conditioned to protect the operator from excessive pesticide exposure.

3.7. Contracting for Pest Management Services:

3.7.1. When pest management service contracts are in the best interest of the Government, prepare them according to contracting regulations and the contract requirements in DoD Directive 4150.7.

3.7.2. The MAJCOM (or ANGRC/CEVP) reviews and approves all statements of work or performance work statements in coordination with the MAJCOM SG staff. The installation must receive MAJCOM approval before a request goes to the installation contracting office for procurement of a commercial pest management service.

3.7.3. The BCE's contract management office works with the installation contracting office to ensure that all prospective contractors send proof that all their personnel have current state certification (within the state of work performance) for the types of operations in the contract.

3.7.4. The prospective contractor must operate in compliance with all state and local regulations. For overseas installations outside US jurisdiction, the final governing standards under DoD Directive 6050.16 apply to pest management contract requirements.

3.7.5. The contractor complies with all applicable parts of 29 Code of Federal Regulations (CFR) 1910, 29 CFR 1925, 40 CFR 150-189 and 49 CFR 171 while on an Air Force installation, to ensure safe working conditions for contract personnel and a safe environment for the occupants of Air Force facilities.

3.7.6. Certified pest management shop personnel help quality assurance evaluators to evaluate pest management contracts.

3.7.6.1. Quality assurance evaluators themselves may receive training in pest management, according to current DoD guidance.

3.7.6.2. The contractor furnishes the quality assurance evaluator with labels and material safety data sheets for all contract pesticide materials. The contractor or quality assurance evaluator sends labels for nonstandard pesticides that are not in the WIMS master pesticide inventory to the MAJCOM for approval within 30 days after contract award.

3.7.6.3. The contractor provides data on daily pesticide use to put into the WIMS pesticide management database. The contractor or quality assurance evaluator inputs the data into WIMS and forwards it quarterly (by 15 days after close of quarter) to the MAJCOM.

3.7.6.4. The quality assurance evaluator maintains historical pesticide data according to AFI 37-139.

4. Technical Publications:

4.1. Beneficial Publications. Every pest control shop should have this AFI and the following publications:

- AFMAN 32-1075, Weed Control and Plant Growth Regulation (formerly AFM 91-19).
- Armed Forces Pest Management Board publications (Technical Information Memorandums, Military Pest Management Handbook, Disease Vector Ecology Profiles) and MIL HBK 1028/8A.
- Pest control trade journals.
- State agricultural extension service pest management literature.
- Pest management textbooks.

NOTE: ANG personnel may contact ANGRC/CEVP for additional guidance.

4.2. Sources. Contact your MAJCOM or HQ AFCESA/DMP for current specifics.

5. Forms Prescribed:

- AF Form 646, US Air Force Pest Management Review.
- DD Form 1532, Pest Management Report.
- DD Form 1532-1, Pest Management Maintenance Report
- DD Form 1826, Certificate of Competency
- DD Form 1826-1, Pesticide Applicator

/s/ JAMES E. McCARTHY, Maj General, USAF
The Civil Engineer

Civil Engineering

SOLID AND HAZARDOUS WASTE COMPLIANCE

This Air Force Instruction implements Air Force Policy Directive 32-70, Environmental Quality. It identifies compliance requirements for all solid and hazardous waste, except radioactive waste. In the United States and its territories, use this guidance with applicable Federal, State, and local standards for solid and hazardous waste. (See AFI 32-7006, Environmental Program in Foreign Countries, for solid and hazardous waste compliance requirements at installations outside the United States and its territories.)

SUMMARY OF CHANGES

This is the initial publication of AFI 32-7042, substantially revising AFR 19-11. This AFI contains new requirements for solid and hazardous waste characterization, training, accumulation, turn in, and disposal. It also outlines new procedures for managing disposal contracts, inspections, permits and record keeping, and host-tenant support. Additionally, it eliminates all requirements pertaining to radioactive waste management.

Chapter 1--How To Use This Instruction

| | |
|--------------------------------------|-----|
| Applicable Standards and Regulations | 1.1 |
| Concept | 1.2 |
| Responsibilities | 1.3 |

Chapter 2--Hazardous Waste Program

| | |
|---------------------------------|------|
| General Requirements | 2.1 |
| Management Plan | 2.2 |
| Training | 2.3 |
| Characterization | 2.4 |
| Accumulation | 2.5 |
| Turn-in and Disposal Procedures | 2.6 |
| Disposal Contracts | 2.7 |
| Inspections | 2.8 |
| Permits and Record Keeping | 2.9 |
| Host-Tenant Support. | 2.10 |

Chapter 3--Solid Waste Program

| | |
|----------------------|-----|
| General Requirements | 3.1 |
| Management Plan | 3.2 |

| | |
|-----------------------------------|-----|
| Handling, Storage, and Collection | 3.3 |
| Disposal | 3.4 |
| Inspections | 3.5 |
| Record-keeping and Reporting | 3.6 |
| Pollution Prevention | 3.7 |

Supersedes AFR 19-11, 14 July 1989

Certified by: HQ USAF/CEV (Col Peter Walsh)

OPR: HQ USAF/CEVC (Maj Doug Murray)

Pages: 12/Distribution F

Attachments

| | |
|--|----|
| 1. Glossary of Abbreviations, Acronyms, and Terms | 8 |
| 2. Hazardous Waste Management Plan Elements | 11 |
| 3. Overview of Solid and Hazardous Waste Management Requirements | 12 |

Chapter 1

HOW TO USE THIS INSTRUCTION

1.1. Applicable Standards and Regulations. Use the procedures in this instruction to comply with applicable Federal, State, and local standards for solid waste (SW) and hazardous waste (HW) management.

1.1.1. For SW, the applicable Federal standard is Subtitle D of Title 40, Code of Federal Regulations (40 CFR) Parts 240 to 244, 257, and 258.

1.1.2. HW regulations are in Subtitle C, 40 CFR Parts 260 to 272.

1.1.3. Follow the more restrictive standard if State or local compliance requirements are more protective than the Federal standards.

1.1.4. Air Force activities in foreign countries must manage SW and HW to comply with the Final Governing Standards or, in their absence, the Overseas Environmental Baseline Guidance Document.

1.2. Concept:

1.2.1. The Air Force must safely manage SW and HW and comply with laws and regulations to protect the environment and the people living and working on and off Air Force facilities.

1.2.2. This instruction is intended to provide major commands (MAJCOM) and installations a framework for complying with environmental standards applicable to SW and HW.

1.2.3. MAJCOMs provide additional implementing guidance in their supplements to this AFI. The MAJCOM supplement must identify the specific "actors" who have implementing responsibility and include any "how-to" guidance needed to comply.

1.3. Responsibilities:

1.3.1. The Assistant Secretary of the Air Force for Manpower, Reserve Affairs, Installations, and Environment (SAF/MI) promulgates and oversees policy for SW and HW compliance.

1.3.2. The Civil Engineer (HQ USAF/CE) formulates policy, allocates resources, and oversees execution of SW and HW compliance programs throughout the Air Force.

1.3.3. MAJCOMs provide execution guidance and oversee implementation. All references to MAJCOMs include the Air National Guard Readiness Center (ANGRC) and other agencies that HQ USAF calls "MAJCOM equivalent."

Chapter 2

HAZARDOUS WASTE PROGRAM

2.1. General Requirements:

2.1.2. Installation Commanders take responsibility for complying with HW disposal laws. Disposal of HW by the DRMO or by Air Force contractors does not relieve the installation commander of this obligation.

2.1.2.1. The base Environmental Protection Committee (EPC) works with the installation commander to oversee compliance with HW laws per AFI 32-7005, Environmental Protection Committees.

2.1.3. Installations submit programming and budgeting needs for facilities, equipment, and manpower per AFI 32-7001, Environmental Budgeting and AFI 65-106, Appropriated Fund Support of Morale, Welfare and Recreation Programs and Nonappropriated Fund Instrumentalities.

2.1.4. Installations with RCRA permits for HW storage, treatment, or disposal must comply with those permits. The permits' restrictions supersede this instruction.

2.1.5. HW generators must have a HW management program to comply with Federal, State, and local regulations and this instruction. The HW management program must include:

- * A hazardous waste management plan (HWMP).
- * Training.
- * Characterization.
- * Turn-in and disposal.
- * Inspections.
- * Permits and record keeping.
- * Host-tenant support.

2.2. Management Plan:

2.2.1. The HWMP must reflect current regulatory requirements and installation HW activities.

2.2.2. The EPC must update and approve the plan annually.

2.2.3. MAJCOMs specify the HWMP's format and content. It contains at least the items listed in attachment 2.

2.2.3.1. If the DRMO acts as the disposal agent, the HWMP must also include the HW turn-in requirements in DoD 4160.21-M, Defense Reutilization and Marketing Manual.

2.3. Training:

2.3.1. All personnel who work with HW and their supervisors must receive and successfully complete HW training before working with HW. They must also successfully complete annual refresher training as the MAJCOM requires. The HW training covers at least the topics in figure 2.1.

TRAINING

- A. Introduction to the Resource Conservation and Recovery Act
- B. Identification of Hazardous Waste
- C. Accumulation Point Management
- D. Container Use, Marking, and Labeling, and On-base Transportation
- E. Waste Turn-in Procedures
- F. Manifesting and Transportation of Hazardous Waste
- G. Spill Prevention and Emergency Response
- H. Waste Reduction
- I. Personnel Safety and Health and Fire Safety

Figure 2.1. Essential Hazardous Waste Training.

2.3.2. MAJCOMs set minimum instructor qualifications for HW training.

2.3.3. HW generators keep training records of former employees for 3 years from the last day the person worked. Keep all other training records permanently.

2.3.3.1. Although MAJCOMs determine format and additional requirements, minimally training records include:

- * Student's name.
- * Job title.
- * Job description.
- * Previous HW training.
- * Dates of training.
- * Instructor's name.
- * Test score (optional).
- * Date of annual refresher course.

2.4. Characterization:

2.4.1. Installations must characterize all their HW streams. Characterization consists of:

- * Identifying (waste analysis plan).
- * Quantifying (HW stream inventory)
- * Describing (HW profile sheet).

2.4.2. Waste Analysis Plan (WAP) describes procedures to identify all HW streams and those streams needing detailed HW determination. Minimally the WAP lists:

- * Wastes evaluated and analyzed.
- * Test methods used.
- * HW sampling methods.
- * Sample analysis locations and frequency.
- * Description of analytical methods.
- * Sample documentation.
- * Sample quality assurance and quality control procedures.
- * Sample request procedures.

2.4.2.1. To analyze the waste stream, ask the person who generated the waste about it and do the analytical tests that 40 CFR 261.10 describe.

2.4.2.2. Require chemical analysis for waste streams of chemical mixtures.

2.4.2.3. MAJCOM supplements to this AFI specify sampling frequencies for HW streams.

2.4.2.4. Reevaluate streams as needed to make sure waste stream characteristics have not substantially changed (for example, the manufacturer substitutes nonhazardous chemicals for hazardous chemicals). Figure 2.2 gives the recommended re-evaluation frequencies for chemical mixture waste streams. Describe the re-evaluation in the WAP.

2.4.2.5. As part of WAP/HW profile record-keeping, document chemical and physical analysis for each waste stream sampled.

REEVALUATION FREQUENCIES A. High volume HW streams. Sample and analyze each waste stream of more than three 55- gallon drums per year at least annually or whenever processes, materials, or materials manufacturers change.

B. Low volume HW streams. Sample and analyze each waste stream of three 55-gallon drums or less per year at least every 3 years or whenever processes, materials, or materials manufacturers change.

Figure 2.2. Reevaluation Frequencies for Chemical Mixtures.

2.4.3. HW stream inventory describes all HW streams generated. All Air Force installations must have a waste stream inventory that lists at least:

- * Generating activity's identity.
- * Generating activity's location.
- * Unique waste stream number.
- * Estimated annual quantity disposed.
- * Disposal location.
- * Disposal method.
- * Waste characteristics (for example, EPA waste code, state waste code, and EPA priority pollutant number).

2.4.4. HW Profile Sheet gives details of each HW stream.

2.4.4.1. Document the waste stream description on HW profile sheet, Defense Reutilization and Marketing Service (DRMS) Form 1930.

2.4.4.2. The WAP and waste stream inventory contain much of the information you need to complete DRMS Form 1930.

2.4.4.3. To use a different profile sheet MAJCOMs must obtain HQ USAF/CEV approval.

2.4.5. Handle all uncharacterized wastes as HW and manage per 40 CFR 262.34, pending determination.

2.4.5.1. For the accumulation start date, use the waste discovery date.

2.5. Accumulation:

2.5.1. Accumulate HW following Federal and State regulations.

2.5.1.1. Minimize the number of accumulation locations to facilitate compliance.

2.5.1.2. Name an individual to manage each accumulation site properly, including its condition and use.

2.5.2. Installations must not manage HW that the DoD does not own except as DoD Directive 6050.8, Storage and Disposal of Non-DoD Owned Hazardous or Toxic Materials on DoD Installations, authorizes. EXCEPTIONS: Actions to protect the public (for example, temporary storage or disposal of explosives) are permitted.

2.5.2.1. MAJCOMs forward requests for exception to HQ USAF/CE, who in turn forwards them through SAF/MI to the Deputy Undersecretary of Defense for Environmental Security (DUSD[ES]).

2.5.2.2. When the non-DoD waste meets exception criteria, the waste's owner must prepare and obtain all needed permits, meet financial requirements, and prepare required environmental documentation before using Air Force property.

2.5.2.3. The waste's owner must leave the facility in its original condition.

2.6. Turn-in and Disposal Procedures:

2.6.1. For HM:

- * Installations must make maximum use of HM before sending it to DRMOs for disposal.
- * Installations must make sure that HM given to the DRMO for reutilization, transfer, donation, or sale (RTDS) or disposal meets the requirements of DoD Manual 4160.21-M.
- * When HW fails DRMO's RTDS program, it will be disposed of as HW.
- * For proper turn in and disposal, installations must attach hazard communication standard (HSC) compliant labels and material safety data sheet (MSDS) information, or include that information in the Hazardous Material Information System (HMIS).
- * HM given to DRMO without these items will be disposed of as HW and the disposal cost will be charged to the generating activity.
- * Air Force installations must not issue, ship, use, or dispose of improperly labeled HM.

2.6.2 For HW:

- * Installations follow DoD Manual 4160.21-M when turning HW into DRMO.
- * Inform HQ USAF/CEV of any suggested improvements to DoD Manual 4160.21-M and any MAJCOM implementing procedures.
- * Installations make sure all HW is weighed in the presence of an authorized DoD official.
- * DRMS, through their DRMOs, act as the DoD HW disposal agent.
- * Installation commanders may use other disposal agents if the commander decides it is in the best interest of the Air Force and the MAJCOM agrees.
- * Consider comparative disposal cost, Government liability, and the qualified and experienced contractors available.
- * MAJCOMs send HQ USAF/CEV copies of all approvals.

2.7. Disposal Contracts. After you've decided to contract for HW disposal and recycling, develop and submit documents to the operational contracting officer (OCO) per AFI 64-102, Operational Contracting. These documents include:

- * Request for purchase.
- * Performance work statement.
- * Quality assurance surveillance plan.

2.7.1. Document Preparation. See AFI 64-108, Service Contracts, which tells how to write a performance work statement and a quality assurance plan.

2.7.1.1. The Staff Judge Advocate and the base environmental manager review and approve these documents before sending them to the OCO. Their reviews ensure that documents follow Federal, State, and local regulations and requirements.

2.7.2. Contracts and Requirements. HW disposal contracts and recycling requirements must:

- * Be at least as stringent as DRMO requirements.
- * Honor existing contracts written by the DRMO.
- * Follow the MAJCOM's contracting practices.

2.7.2.1 The contracting office writes a solicitation and a contract, using provisions and clauses from the Federal Acquisition Regulation (FAR) and its supplements, including those of FAR part 23, Environment, Conservation, Occupational Safety and Drug-Free Workplace.

2.7.2.2. Contracts for HW disposal must require the contractor to make sure its employees receive appropriate training as Federal, State, and local law requires.

2.7.3. Inspections of Contractor Facilities:

2.7.3.1. If appropriate, survey and visit the proposed treatment or disposal site for all potential contractors.

2.7.3.2. Before awarding a contract, verify the permits held by the various treatment or disposal sites.

2.7.3.3. Evaluate all proposed HW transport contractors the same way.

2.7.3.4. Do on-site "no notice" followup verification audits for all contractor HW treatment and disposal facilities receiving Air Force HW. Do these inspections yearly to verify proper "cradle-to-grave" waste handling and disposal.

2.8. Inspections. The HW program consists of scheduled and unscheduled inspections of HW activities.

2.8.1 Perform internal and external environmental compliance assessments per AFI 32-7045, Environmental Compliance Assessment and Management Program (ECAMP).

2.8.2. Installation commanders also conduct no-notice inspections of HW generating, accumulation, and storage activities.

2.8.3 Document findings and begin corrective actions promptly.

2.8.4. As security requirements permit, support environmental compliance inspections.

2.9. Permits and Record Keeping:

2.9.1. Note that the installation commander signs environmental permits and receives regulatory agency correspondence and enforcement actions.

2.9.1.1. Have the commander or designated individual signs the manifests that track off-base HW shipment and recycling.

2.9.1.2. Send the MAJCOM and the appropriate Air Force regional compliance office a copy of each HW permit application and HW permit.

2.9.2. Track HW with the EPA HW manifest (or State equivalent) and report HW management activities per AFI 32 7002, Environmental Information Management Systems.

2.9.2.1 MAJCOMs whose HW tracking and reporting systems differ from AFI 32-7002 must get HQ USAF/CEV approval in order to use them.

2.10. Host-Tenant Support:

2.10.1. The Air Force supports the HW disposal needs of both Air Force and DoD tenants on Air Force installations.

2.10.1.1. For intraservice support, host Air Force installations plan and fund for their tenants' HW disposal needs per AFI 32-7001.

2.10.2. Tenants:

- * Follow all laws and regulations and the installation HWMP.
- * Provide input and submit reports that the HWMP requires.

2.10.2.1. When tenants do not comply with HW laws, the installation commander may take any action needed to require them (and their contractors) to comply.

2.10.2.2. Tenants responsible for HW management facilities must seek permitting through facility-wide permits. The tenant then signs as "operator" and the installation commander signs as "owner."

2.10.3. If a tenant organization generates enough HW to burden the host, the host and tenant negotiate an agreement on how much the tenant pays for HW disposal.

EXCEPTIONS: All industrially-funded Air Force tenants and Services activities. These activities pay their operation and maintenance expenses, including HW disposal costs.

2.10.3.1. AFI 65-106 gives instructions for funding HW disposal for MWR activities.

2.10.4. For interservice support of a DoD component or agency tenant, host installations may seek reimbursement for HW disposal costs for on- and off-base tenants, following the procedures in AFI 65-601, volume 1, USAF Budget Policies and Procedures.

2.10.4.1. If host-tenant support agreements (HTSA) or interservice support agreements (ISA) do not reflect reimbursement procedures, renegotiate. In the negotiations:

- * Consider budget lead time to minimize the effect on tenants.
 - * Give the installation commander wide latitude to determine the most effective arrangement for negotiating cost-sharing with tenants.
 - * Consider that the installation commander carries both initial and primary liability for HW management when including HW disposal services in HSTAs or ISAs.
-

3.1. General Requirements:

3.1.1. Each installation must have a solid waste (SW) management program. Attachment 2 summarizes Federal SW management requirements. The SW management program must address:

- * A solid waste management plan (SWMP).
- * Handling, storage, and collection.
- * Disposal.
- * Record-keeping and reporting.
- * Pollution prevention.

3.1.1.1. AFI 32-7080, Pollution Prevention Program, contains the SW requirements for preventing pollution through source reduction, resource recovery, and recycling.

3.1.2. Consider these costs as utility costs, not environmental compliance costs:

- * Programming and budgeting requirements for facilities, equipment, and manpower.
- * Tipping fees.
- * On-base landfill operations to meet SW collection and disposal requirements. (See AFI 32-7001.)

3.2. Management Plan:

3.2.1. All Air Force installations must have a complete SWMP that meets the requirements of AFR 91-8, Solid Waste Management, chapter 3. Developed at the installation level, the SWMP contains guidance for managing SW. It supports the development and implementation of State plans RCRA Subtitle D requires. To ensure compliance with Federal and State SWMP requirements, Air Force SWMPs contain:

- * Inventory and analysis of SW disposal technologies and methods.
- * Inventory of SW streams and management methods.
- * Analysis of SW recovery, conservation, and recycling.
- * Evaluation of any on-base operating landfills.
- * Plan implementation.

3.3. Handling, Storage, and Collection:

3.3.1. Installations make sure that receptacles, collection routes, collection schedules, and collection equipment (trucks) meet 40 CFR 243, DoDD 4165.60, Solid Waste Management - Collection, Disposal, Resource Recovery and Recycling Program, and AFR 91-8 criteria, as well as State and local requirements.

3.3.1.1. Get all permits needed for SW handling, storage, and collection (including SW transfer facilities) and perform any required maintenance inspections and notifications.

3.3.1.2. Vehicles collecting and transporting SW must meet all standards, such as:

- * Motor carrier safety standards (49 CFR parts 390 through 396).
- * Noise-emission standards for motor carriers in interstate commerce (40 CFR part 202).
- * Federal motor vehicle safety standards (49 CFR parts 500 and 580 only for collection equipment that the Federal Government owns).

3.3.1.3. In addition to 40 CFR 243 and DoD Directive 4165.60 requirements, the collection equipment must meet the standards of the American National Standards Institute (ANSI).

3.3.2. The installation commander names military personnel, civilian personnel, or contractors as SW collection personnel.

3.3.2.1. When contractors collect waste, the contractor's SW collection plan must meet Air Force, Federal, State, and local requirements.

3.4. Disposal:

3.4.1. All solid waste disposal must meet 40 CFR 240 and 241, DoD Directive 4165.60, and AFR 91-8 criteria and State and local requirements.

3.4.1.1. These regulations and directives contain specific location, design, and operating criteria for new thermal processing and land disposal facilities. These general requirements apply to all SW disposal.

3.4.1.2. As a subset of SW, municipal SW must meet the additional, more stringent requirements of 40 CFR 258.

3.4.2. Air Force installations use municipal or regional facilities for SW disposal, when feasible. When an installation can't use such and its own facilities, their construction and operation must follow all laws, regulations, and directives.

3.4.3. Air Force installations must dispose of SW in a permitted secure landfill or other State-approved site, for example, a thermal-processing facility.

3.4.3.1. Note that the Air Force prefers ultimate disposal by recycling and composting. AFI 32-7080 addresses alternatives.

3.4.3.2. Verify permits and licenses for off-base landfills.

3.4.3.3. Remember each installation must obtain siting authorization, permits, and licenses to construct and operate an on-base SW landfill or thermal treatment facility. For specific guidelines, see:

- * 40 CFR 240 for thermal processing of solid wastes.
- * 40 CFR 258 for siting and design of municipal SW landfills.

3.4.4. Before closing an on-base landfill, plan adequate lead time for meeting post-closure requirements, typically 30 years for maintenance and groundwater monitoring. Post-closure procedures may require long-term operation of leachate collection and treatment systems or a system for extracting landfill gas.

3.5. Inspections. The SW program consists of scheduled and unscheduled inspections of SW collection, transfer, and disposal facilities.

3.5.1. Perform internal and external environmental compliance assessments following AFI 32-7045.

3.5.2. Document inspection findings and begin corrective actions promptly.

3.5.3. As security requirements permit, support environmental compliance inspections.

3.5.4. Ensure each installation inspects industrial shop waste receptacles to make sure they contain no HW.

3.5.4.1. Keep records for at least 2 years after the inspection date.

3.5.4.2. Inform all installation personnel and especially industrial shop personnel of prohibited materials.

3.6. Record Keeping and Reporting:

3.6.1. Maintain daily operating records following the instructions for managing service contracts for refuse collection, disposal, and recycling.

3.7. Pollution Prevention:

3.7.1. AFI 32-7080 covers source reduction, resource recovery, and recycling activities.

/s/ JAMES E. McCARTHY, Maj General, USAF

The Civil Engineer

GLOSSARY OF ABBREVIATIONS, ACRONYMS, AND TERMS

Section A -- Abbreviations and Acronyms

| | |
|---------------------|---|
| AF | Air Force |
| AFCEE | Air Force Center for Environmental Excellence |
| AFCEE/CCR- A,D,S | Air Force Center for Environmental Excellence Regional Compliance Offices (Atlanta, Dallas, San Francisco) |
| AFI | Air Force Instruction |
| AFLSA/JACE | Air Force Legal Support Agency, Environmental Law Division |
| AFM | Air Force Manual |
| AFO | Accounting and Financing Officer |
| AFR | Air Force Regulation |
| ANSI | American National Standards Institute |
| ASD (P&L) | Assistant Secretary of Defense for Production and Logistics |
| CE | Civil Engineer |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act |
| COPARS | Contractor Operated Parts Store |
| CFR | Code of Federal Regulations |
| DLA | Defense Logistics Agency |
| DoD | US Department of Defense |
| DOT | US Department of Transportation |
| DRMO | Defense Reutilization and Marketing Office |
| DRMS | Defense Reutilization and Marketing Service |
| DTID | Disposal Turn-In Document |
| DUSD(ES) | Deputy Undersecretary of Defense for Environmental Security |
| ECAMP | Environmental Compliance Assessment and Management Program |
| EPA | US Environmental Protection Agency |
| EOD | Explosive Ordnance Disposal |
| EPC | Environmental Protection Committee |
| FAR | Federal Acquisition Regulation |
| FFCA | Federal Facilities Compliance Act |
| FOA | Field Operating Agency |
| GOCO | Government-owned, Contractor-operated |
| HCS | Hazard Communication Standard |
| HMIS | Hazardous Material Information System |
| HM | Hazardous Material |
| HMTA | Hazardous Material Transportation Act |
| HQ NGB/CE | National Guard Bureau Civil Engineer |
| HQ USAF | Headquarters, US Air Force |
| HQ USAF/CE | Headquarters, US Air Force, Civil Engineer |

| | |
|-------------|---|
| HQ USAF/CEV | Headquarters, US Air Force, Civil Engineer, Directorate Environmental Quality |
| HQ USAF/JA | The Judge Advocate General |
| HQ USAF/LG | Deputy Chief of Staff, Logistics |
| HQ USAF/RE | Chief of Air Force Reserve |
| HQ USAF/SG | The Air Force Surgeon General |
| HSWA | Hazardous and Solid Waste Amendments |
| HTSA | Host-Tenant Support Agreement |
| HW | Hazardous Waste |
| HWMP | Hazardous Waste Management Plan |
| ISSA | Interservice Support Agreement |
| MAJCOM | Major Command |
| MSDS | Material Safety Data Sheet |
| MWR | Morale, Welfare and Recreation |
| OCO | Operational Contracting Officer |
| OSD | Office of The Secretary of Defense |
| OSHA | US Occupational Safety and Health Administration |
| PCB | Polychlorinated biphenyl |
| R&D | Research and development |
| RCRA | Resource Conservation and Recovery Act |
| RTDS | Reutilization, Transfer, Donation or Sale |
| SAF | Secretary of the Air Force |
| SAF/AQ | Assistant Secretary of the Air Force for Acquisition |
| SAF/MI | Assistant Secretary of the Air Force (Manpower, Reserve Affairs, Installations and Environment) |
| SAF/MIQ | Deputy Assistant Secretary of the Air Force (Environment, Safety and Occupational Health) |
| SBSS | Standard Base Supply System |
| SARA | Superfund Amendments and Reauthorization Act |
| SW | Solid Waste |
| SWMP | Solid Waste Management Plan |
| TSCA | Toxic Substances Control Act |
| WAP | Waste Analysis Plan |
| WIMS-ES | Work Information Management System-Environmental Subsystem |

Section B -- Terms

Accumulation Site--A provision of 40 CFR 262, subpart C, which allows storage of hazardous wastes for a period of up to 90 days without a storage permit, or without having interim status. Typically the sites are distant from the activities and subject to additional inspection and containment requirements in subparts I and J of 40 CFR 265. (See "initial accumulation point" in this glossary.)

Characteristic Waste--A waste with any characteristic listed in 40 CFR 261, subpart C (for example, toxicity, corrosiveness, ignitibility, or reactivity).

EPA Waste Code--An EPA HW number listed in 40 CFR 261, subpart C (characteristic waste) or subpart D (listed waste).

Generator--A person or a site, whose act or process produces HW or whose act first subjects HW to regulation. EPA and State environmental regulatory agencies typically consider the Air Force installation as the generator. Therefore, in this AFI "HW generator" refers to the installation commander or the commander's named designee.

Generating Activity--Each organization (including tenants), shop, or work area using an operation or process that first generates an HW stream. The installation HWMP must identify generating activities.

Hazard Communication Standard--A Federal Occupational Safety and Health Administration (OSHA) requirement, 29 CFR 1910.1200, that requires labeling and MSDSs so employees know materials are hazardous.

Hazardous Constituent--Any component or chemical in a mixture, found in 40 CFR 261, appendix VIII or 40 CFR 264, Appendix IX.

Hazardous Material (HM)--Any material that presents a physical or health hazard and requires an MSDS as defined in the latest version of FED-STD 313.

Hazardous Material Generating Activity--Each installation organization (including Air Force and non-Air Force tenants) that creates HM requiring disposal.

Hazardous Waste--Any solid waste defined in 40 CFR 261.3 or State HW management rules and regulations.

Hazardous Waste Characterization--The identification, description, and quantification of an HW stream.

Hazardous Waste Management Plan (HWMP)--An installation-developed plan containing guidance for base personnel on local procedures for managing HW and incorporating pollution prevention practices into HW management pollution. The HWMP should include all tenants, including Government-owned, contractor-operated (GOCO) facilities that generate HW.

Hazardous Waste Profile Sheet--A document (DRMS Form 1930) that describes the physical and chemical properties of HW.

Listed Waste--A specifically identified solid waste, material, or item listed in 40 CFR 261, Subpart D.

Manifest--HW shipping document required by Federal or State regulatory agencies for transportation of HW. Manifests that the installation commander or a named representative signs track HW to a permitted or interim status treatment, storage, or disposal facility. (Refer to 40 CFR 262, subpart B.)

Material Safety Data Sheet (MSDS)--A document containing the data required by, and prepared in accordance with FED STD 313, to communicate to the user of the chemical, physical, and hazardous properties of material.

Initial Accumulation Point--A collection point located at, or near, the point of waste generation where wastes are initially accumulated. The area must be under the control of the operator of the process generating the waste. The operator should be near the area often enough to detect a leak within a reasonable timeframe. A maximum of 55 gallons of HW or one quart of acutely HW may be accumulated in an initial accumulate point. If more than this amount is accumulated, the excess must be move to an accumulation site within 3 days of exceeding the limit. Unless the quantity limit is exceeded, there are no storage time limits that apply to initial accumulation points. Initial accumulation points are also known as satellite accumulation points.

Solid Waste--Any discarded material as defined in 40 CFR 261.2.

HAZARDOUS WASTE MANAGEMENT PLAN ELEMENTS

1. Letter of Instruction.
2. Information and Emergency Contacts.
3. Introductory Materials.
 - a. Table of contents
 - b. Record of annual review.
 - c. Record of changes.
 - d. List of tables and figures.
4. Introduction.
5. Responsibilities.
6. Organization Chart.
7. Location Maps.
8. Hazardous Waste Inventory.
9. Waste Analysis Plan.
10. Hazardous Waste Management Procedures.
11. Reporting.
12. Training.
13. Contingency Plan Summary.
14. Preparedness and Spill Prevention Summary.
15. Pollution Prevention Summary.

OVERVIEW OF SOLID AND HAZARDOUS WASTE MANAGEMENT REQUIREMENTS

A3.1. Summary of Applicable Federal Laws Regulating Hazardous and Solid Waste:

A3.1.1. Occupational Safety and Health Act. The Occupational Safety and Health Act (OSHA, 29 U.S.C. 651, et seq.) sets standards for safe working conditions. In addition, OSHA sets training requirements for Resource Conservation and Recovery Act (RCRA) facilities and HW sites. Title 29 of the Code of Federal Regulations, parts 1900 through 1910 (29 CFR 1900 through 1910), contains OSHA standards. 29 CFR 1926 contains OSHA construction standards.

A3.1.2. Hazardous Material Transportation Act. The Hazardous Material Transportation Act (HMTA, 49 U.S.C. 1801, et seq.) of 1974 requires the Secretary of Transportation to declare standards for commercially transporting hazardous materials. These standards protect public health and safety or property. 49 CFR 170 to 179 includes the rules.

A3.1.3. Toxic Substances Control Act. The Toxic Substances Control Act (TSCA, 15 U.S.C. 2601, et seq.) made law a program for evaluating the harmful effects of newly manufactured chemicals. TSCA regulates the storage, treatment, and disposal of polychlorinated biphenyls (PCBs). See 40 CFR 750 and 761.

A3.1.4. Resource Conservation and Recovery Act and Hazardous and Solid Waste Amendments. The Resource Conservation and Recovery Act (RCRA, U.S.C. 6901, et seq.) as amended by the Hazardous and Solid Waste Amendments (HSWA) of 1986, sets minimum standards for "cradle-to-grave" management of SW and HW. See the EPA RCRA regulations for: * HW management (Subtitle C) in 40 CFR parts 260 to 272. * SW (Subtitle D) in 40 CFR parts 240 to 244, 257, and 258. *Underground storage tanks (Subtitle I) in 40 CFR 280 and 281.

A3.1.5. Comprehensive Environmental Response, Compensation, and Liability Act and Superfund Amendments and Reauthorization Act. The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, 42 U.S.C. 9601, et seq.) of 1980 and the Superfund Amendments and Reauthorization Act (SARA) of 1986 authorized funds to clean up abandoned HW sites and provided that the responsible parties reimburse the Government for cleanup costs.

A3.1.6. Federal Facility Compliance Act. The Federal Facility Compliance Act (FFCA, 42 U.S.C. 962, et seq.) takes away the Federal Government's sovereign immunity from civil penalties for violating State, Federal, and local SW and HW laws. This legislation allows State and Federal regulatory agencies to fine Federal facilities for violating State, Federal, and local SW and HW laws.

A3.2. State and Local Solid and Hazardous Waste Management Requirements. States must adopt or enact regulations at least as stringent as Federal regulations for SW and HW. Each State has SW regulations, many of which are more stringent than Federal HW regulations. Local requirements may restrict zoning, transportation, and other activities.

A3.3. Summary of US Department of Defense (DoD) Solid and Hazardous Waste Management Requirements. The Defense Logistics Agency (DLA) provides recycling, reuse, and disposal services for each DoD installation through the DRMS and its field activities, the DRMOs. See:

*AFI 32-7080, Pollution Prevention Programs which addresses SW recycling.

*Chapter IX of DoD Manual 4160.21-M, Defense Reutilization and Marketing Manual, and DRMS-M 6050.1, Environmental Compliance for the DRMS Hazardous Property Program, which explain general procedures for implementing the DRMS hazardous property program .

*DoD Directive 4165.60, Solid Waste Management - Collection, Disposal, Resource Recovery and Recycling Program, which contains policies and procedures for managing SW per EPA SW regulations.

Civil Engineering

ENVIRONMENTAL BUDGETTING

This AFI implements AFPD 32-70, Environmental Quality. It provides guidance on identifying, developing, and processing requirements to meet environmental standards at all Air Force installations. It identifies specific responsibilities and gives major commands (MAJCOM) and field operating agencies maximum leverage to flexibly manage environment-related budgets. Attachment 1 lists the references, abbreviations, and acronyms used in this instruction.

Chapter 1--How To Use This Instruction

| | |
|------------------------|-----|
| Background | 1.1 |
| Responsibilities | 1.2 |

Chapter 2--Elements of the Air Force Cleanup Program Budget

| | |
|--|------|
| Program Description | 2.1 |
| The Cleanup Program Funding System | 2.2 |
| Distributing Cleanup Funds | 2.3 |
| Eligibility Criteria for Defense Environmental Restoration Program Funding | 2.4 |
| Validating Cleanup Requirements | 2.5 |
| Documentation | 2.6 |
| Work Information Management System--Environmental Subsystem (WIMS--ES) | |
| Cleanup Module | 2.7 |
| Emerging Requirements | 2.8 |
| Funding for Training | 2.9 |
| Funding for Technical Information Systems | 2.10 |
| Installation Restoration Program Priorities | 2.11 |
| Documenting Installation Restoration Program Projects Needs | 2.12 |
| The Remedial Action Cost Engineering and Requirements (RACER) System | 2.13 |
| Manpower and Management | 2.14 |
| Examples of Cleanup Projects and Services | 2.15 |

Chapter 3--Elements of the Environmental Compliance Program Budget Program Description ...

| | |
|--|-----|
| Appropriations | 3.2 |
| US and US Territory Environmental Compliance Requirements | 3.3 |
| Oversea Environmental Compliance Requirements | 3.4 |
| Examples of Environmental Compliance Projects and Services | 3.5 |
| Environmental Compliance Program Exclusions | 3.6 |
| Environmental Compliance Documentation | 3.7 |
| Reporting Environmental Compliance Requirements | 3.8 |

Chapter 4--Elements of the Conservation Resources Program Budget Program Description.....4.1

OPR: HQ USAF/CEV (Maj Ronald D. Marlin)

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Certified by: HQ USAF/CEV (Col Peter Walsh)

| | |
|---|-----|
| Appropriations | 4.2 |
| US and US Territory Cultural Resources Requirements | 4.3 |
| Oversea Cultural Resources Requirements | 4.4 |
| Examples of Cultural Resources Projects and Services..... | 4.5 |
| Cultural Resources Program Exclusions | 4.6 |
| Cultural Resources Documentation..... | 4.7 |
| Reporting Cultural Resources Requirements | 4.8 |

Chapter 5--Elements of the Pollution Prevention Program Budget Program Description.....5.1

| | |
|--|-----|
| Appropriations | 5.2 |
| US and US Territory Pollution Prevention Requirements | 5.3 |
| Oversea Pollution Prevention Requirements | 5.4 |
| Examples of Pollution Prevention Projects and Services | 5.5 |
| Pollution Prevention Program Exclusions | 5.6 |
| Pollution Prevention Documentation | 5.7 |
| Reporting Pollution Prevention Requirements | 5.8 |

Attachments

| | |
|---|----|
| 1. Glossary of References, Abbreviations, and Acronyms | 11 |
| 2. Examples of Cleanup Projects and Services (Priority 1 Work)..... | 12 |
| 3. Examples of Cleanup Projects and Services (Priority 2 Work)..... | 14 |
| 4. Examples of Environmental Compliance Projects and Services..... | 15 |
| 5. Environmental Compliance Program Exclusions | 17 |
| 6. Examples of Cultural Resources Projects and Services..... | 18 |
| 7. Cultural Resources Program Exclusions | 20 |
| 8. Examples of Pollution Prevention Projects and Services | 21 |
| 9. Pollution Prevention Program Exclusions | 23 |

Chapter 1

HOW TO USE THIS INSTRUCTION

1.1. Background. The Air Force complies with environmental standards and laws, to ensure that it is a good steward of the resources it uses. Prudent management of these resources ensures long-term access to the air, land, and water the Air Force needs to sustain mission capability.

1.2. Responsibilities:

1.2.1. HQ USAF:

1.2.1.1. The Assistant Secretary of the Air Force for Manpower, Reserve Affairs, Installations, and Environment (SAF/MI) provides broad policy guidance and oversight for the entire environmental program.

1.2.1.2. The Civil Engineer, HQ USAF (HQ USAF/CE): Develops environmental policy. Verifies compliance with cleanup, conservation, and pollution prevention standards.

1.2.1.2.1. The Civil Engineer justifies and allocates funding for: MAJCOMs. Air Force Center for Environmental Excellence (AFCEE). The Air Force Civil Engineering Support Agency (AFCESA).

1.2.1.3. The Assistant Secretary of the Air Force (Acquisition) (SAF/AQ) obtains environmental research funding by advocating, programming, and budgeting for the Air Force Science and Technology program for environmental quality.

1.2.2. Major Commands. MAJCOM two-letter offices may publish supplements to this AFI as necessary. Supplements must assign specific areas of responsibility and must include the guidance necessary to comply with this AFI.

1.2.3. HQ AFRES and NGB:

1.2.3.1. The HQ AFRES Civil Engineer and the NGB Civil Engineer justify and allocate funding for their respective organizations.

1.2.3.2. HQ AFRES and NGB may publish supplements to this AFI as necessary. Supplements must assign specific areas of responsibilities and must include the guidance necessary to comply with this AFI.

Chapter 2

ELEMENTS OF THE AIR FORCE CLEANUP PROGRAM BUDGET

2.1. Program Description. The Air Force Cleanup Program consists of three components:

2.1.1. The Installation Restoration Program:

2.1.1.1. Concentrates on cleaning up contamination from past DoD activities.

2.1.1.2. Ensures the Air Force meets its lawful obligations to eliminate threats to public health and restore natural resources for future use.

2.1.2. Other Hazardous Waste Operations Program:

2.1.2.1. For specific activities covered in this program, refer to DoD Management Guidance for Execution and Development of the Defense Environmental Restoration Program (current edition).

2.1.2.2. Program environmental compliance or pollution prevention funding for these requirements, due to higher priority Installation Restoration Program requirements.

2.1.3. Building Demolition and Debris Removal:

2.1.3.1. Demolishes and removes unsafe buildings or structures at installations and at properties formerly-owned or used by the Air Force.

2.1.3.2. Program real property maintenance funding for these requirements, due to higher priority Installation Restoration Program requirements.

2.2. The Cleanup Program Funding System:

2.2.1. The Defense Environmental Restoration Account (DERA), a special transfer account established by Title 10, United States Code, Section 2703, funds the Air Force Cleanup Program.

2.2.2. The Deputy Under Secretary of Defense for Environmental Security (DUSD[ES]): Serves as the central manager of Defense Environmental Restoration Account. Develops and defends the budget to Congress. Allocates funds between the Army, Navy, Air Force, and Defense Logistic Agency (the "DoD Components") based on their requirements and mandated priorities.

2.2.3. DoD transfers funds from Defense Environmental Restoration Account to DoD component appropriations accounts. Generally, the Air Force receives apportionments in the following

appropriations: Operation and Maintenance (3400). Other Procurement (3080). Research, Development, Test and Evaluation (RDT&E) (3600).

2.2.4. As lead agency for the Cleanup Program, Civil Engineering consolidates and tracks requirements and manages the Defense Environmental Restoration Account.

2.3. Distributing Cleanup Funds:

2.3.1. From DoD to USAF:

2.3.1.1. The DoD Comptroller transfers Defense Environmental Restoration Account funds to the various Air Force accounts (see paragraph 2.2.3) at the request of the Assistant Secretary of the Air Force for Manpower, Reserve Affairs, Installations, and Environment (SAF/MI).

2.3.1.2. Transferred DoD funds take on the same characteristics as other funds residing in the appropriation.

2.3.1.3. DoD determines component Defense Environmental Restoration Account funding levels based on legally binding agreements with regulatory authorities. If congressional appropriations are insufficient to cover all legally binding agreements, projects will be prioritized to protect public health and the environment.

2.3.2. From USAF to MAJCOMs (or Equivalent). HQ USAF/CEVR distributes Defense Environmental Restoration Account funds largely based on the Priority 1A requirements (see paragraph 2.11) included in each MAJCOM's annual Defense Environmental Restoration Account budget submittal. (Defense Environmental Restoration Account funds are generally limited.)

2.3.3. MAJCOM Adjustments:

2.3.3.1. MAJCOMs may make cost adjustments to Defense Environmental Restoration Account funded projects provided these conditions hold true: The MAJCOM highlights the adjustment in the Work Information Management System - Environmental Subsystem Cleanup Module. The requesting organization (MAJCOM Agency, and so on) maintains documentation for approved adjustments. Defense Environmental Restoration Account funding is available within the MAJCOM's existing resources. (See paragraph 2.8 for exceptions.)

2.3.3.2. See paragraph 2.5.7 for adjustments to projects rolling over from one fiscal year to the next.

2.3.4. Automated Budget Interactive Data Environment System:

2.3.4.1. The Air Force and DoD use this database, considered the official Air Force fiscal database, to determine the Defense Environmental Restoration Account obligation rate.

2.3.4.2. Through locally developed reports, MAJCOMs review input to this database with their comptrollers at the end of each quarter to ensure accuracy.

2.4. Eligibility Criteria for Defense Environmental Restoration Program Funding. For specific eligibility criteria, refer to DoD Management Guidance for Execution and Development of the Defense Environmental Restoration Program (current edition).

2.5. Validating Cleanup Requirements:

2.5.1. MAJCOMs have the authority to validate Defense Environmental Restoration Account projects provided they:

2.5.1.1. Place increased emphasis on funding actual cleanups and streamlining the study process.

2.5.1.2. Consider interim remedial actions over detailed studies where feasible.

2.5.1.3. Accomplish peer reviews prior to validating remedial design efforts. For complex sites, an additional peer review must be completed prior to the remedial action phase.

2.5.1.4. Report all new projects, not contained in the original annual budget submittal, and those projects which change significantly from the original budget submittal to HQ USAF/CEVR upon project validation. Details for submission are contained in the annual call letter distributed by HQ USAF/CEVR.

2.5.2. HQ USAF/CEVR will forward the information in paragraph 2.5.1.4 to the Deputy Assistant Secretary of the Air Force (Environment, Safety and Occupational Health)(SAF/MIQ) upon receipt from the MAJCOM.

2.5.3. MAJCOMs must limit manpower validation to the lesser of the total positions previously validated or the amount obligated for manpower in the previous FY.

2.5.4. MAJCOMs must limit manpower and management (combined) to the lesser of 8 percent of the total current year validated priority 1A program or the amounts obligated for management and manpower in the previous fiscal year.

2.5.5. HQ USAF/CEVR will continue to validate computer requirements, including technical information system management plans.

2.5.6. HQ USAF/CEVR will conduct an annual review of each MAJCOM Defense Environmental Restoration Account program.

2.5.7. MAJCOMs must specifically identify rollover cleanup projects in their current fiscal year Defense Environmental Restoration Account funded project documentation and the Cleanup Module. Documentation must include justification as to what precluded obligation in the programmed fiscal year.

2.6. Documentation:

2.6.1. MAJCOMs must document project requirements before entering them in the Cleanup Module. See paragraph 2.11 for specific project documentation required for each phase of the Installation Restoration Program.

2.6.2. HQ USAF/CEVR uses this documentation to determine funding distribution, defend MAJCOM proposed cleanup projects, and prepare the Defense Environmental Restoration Account budget submittal.

2.6.3. MAJCOMs may maintain documentation for additional validated cleanup needs in the current fiscal year. Such a documented backlog provides MAJCOMs flexibility in executing additional requirements during the fiscal year.

2.6.4. HQ USAF/CEVR sends letter to the MAJCOMs annually stating when documentation for proposed cleanup projects is required.

2.7. Work Information Management System--Environmental Subsystem (WIMS--ES) Cleanup Module:

2.7.1. The Cleanup Module project database (also referred to as "DREQ") is crucial to managing Defense Environmental Restoration Account funding. Commands use this database to: Indicate previously approved funding commitments and obligations. Provide project/program validation status. Electronically submit their cleanup needs documentation to HQ USAF/CEVR.

2.7.2. HQ USAF/CEVR uses the database to determine funding allocations. EXCEPTION: MAJCOMs can also send requirements documentation to HQ USAF/CEVR via letters and messages if unique situations arise.

2.7.3. Obligation data contained in this database must be reconcilable with the official database described in paragraph 2.3.4.

2.7.4. Commands must enter a validated amount and date prior to executing the requirement.

2.8. Emerging Requirements:

2.8.1. Defense Environmental Restoration Account funded projects may significantly change in cost, and new requirements may emerge during a fiscal year. Normally, these requirements must be funded within available MAJCOM (or equivalent) distributions.

2.8.2. The MAJCOM or other Air Force component requesting additional Defense Environmental Restoration Account funding must: Provide appropriate justification, in accordance with the guidelines outlined in paragraph 2.5, indicating the urgency of its need for

out-of-cycle funding. Include a completed Defense Environmental Restoration Account Funding Line Adjustment document in the project file. NOTE: For specific details on preparing Funding Line Adjustments, refer to the Installation Restoration Program Management Guide (White Book).

2.9. Funding for Training:

2.9.1. The Air Force Institute of Technology (AFIT) acts as the central focus for Cleanup Program training. Through Headquarters Air Education and Training Command, they fund all Cleanup Program (Defense Environmental Restoration Account funded) training. EXCEPTION: AFIT does not fund conferences and seminars with Defense Environmental Restoration Account funds.

2.9.2. Funding for conferences must be identified separately within the MAJCOM management line item. Documentation must annotate that the conference are in support of the Installation Restoration Program.

2.9.3. MAJCOMs identify their training needs in their management line items.

2.10. Funding for Technical Information Systems:

2.10.1. Air Force organizations must prepare a Technical Information System Management Plan to propose and justify spending Defense Environmental Restoration Account funds on: The purchase or maintenance of geotechnical computing systems or components (hardware or software). The use of staff to develop or use such tools.

2.10.2. The management plan summarizes the results of prior technical information system design studies including:

- Requirements analyses.
- Product evaluations and comparisons.
- Computer-system architecture.
- Cost estimates.

NOTE: Refer to the White Book for specific details on preparing Technical Information System Management Plans.

2.11. Installation Restoration Program Priorities:

2.11.1. MAJCOMs give all Installation Restoration Program projects a priority rating of 1A, 1B, or 2, as outlined in paragraphs 2.11.4 through 2.11.7.

2.11.2. Funding goes first to projects that pose the greatest risk to human health and the environment. DoD policy is to fund priority 1 projects before priority 2 projects.

2.11.3. The annual Installation Restoration Program call letter from HQ USAF/CEVR outlines any changes in priorities.

2.11.4. Priority 1 includes projects that: Eliminate human exposure to contamination, address imminent threats, or otherwise protect human health. Require immediate action to stabilize a site, including source and free product removal. Are necessary to comply with applicable Federal, state, or local cleanup requirements related to Defense Environmental Restoration Account eligible site cleanup; or to meet schedules and milestones set forth in official agreements between DoD and regulatory agencies (for example, Federal Facility Agreements/Interagency Agreements, Notices of Violation, Part B Permits, Consent Orders, and so on).

2.11.5. The Air Force further divides priority 1 projects into priorities 1A and 1B.

2.11.5.1. Priority 1A projects are those outlined in paragraph 2.11.4 necessary in the current fiscal year to eliminate an imminent threat, satisfy an immediate need, or meet a regulatory schedule. The following are also considered Priority 1A as they are required to execute the program and maintain existing operations. Manpower and management to execute the current fiscal year baseline program. Long-term operations for interim remedial action or remedial action systems. Long-term monitoring of sites in remediation.

2.11.5.2. Priority 1B projects are those projects necessary to accelerate activities at a Priority 1 site from a future fiscal year.

2.11.6. If both priority 1A and 1B work is necessary at a particular site in a single fiscal year, prepare two separate projects and associated justifications.

2.11.7. Priority 2 includes projects that: Provide extra assurance of adequate protection of the health of installation personnel and the public. Provide activities to maintain Installation Restoration Program progress.

2.12. Documenting Installation Restoration Program Projects Needs. There are different types of documentation needed to justify Installation Restoration Program projects, depending on the specific need addressed.

2.12.1. Project narratives are required for the following phases of the Installation Restoration Program:

- Preliminary Assessments.
- Site Inspections.
- Remedial Investigations.
- Feasibility Studies.
- Technology Demonstrations.

2.12.2. Details for narrative content and preparation are contained in the annual call letter distributed by HQ USAF/CEVR.

2.12.3. DD Forms 1391, FY 19 Military Construction Program, and 1391C, FY Military Construction Project Data, are required for all remedial designs and actions.

2.13. The Remedial Action Cost Engineering and Requirements (RACER) System:

2.13.1. Use the Remedial Action Cost Engineering and Requirements system (refer to AFI 32-7020, Installation Restoration Program Management Guidance, for details) to estimate costs for outyear programs.

2.13.2. If you do not use this system, identify the estimating tool you do use and describe your reasons for not using the Remedial Action Cost Engineering and Requirements system.

2.14. Manpower and Management:

2.14.1. Manpower:

2.14.1.1. The cleanup program encourages a team approach in developing and executing cleanup projects. Include representatives from across the wing such as: Bioenvironmental engineers (to evaluate remedial investigation data). Lawyers (to review regulatory policy). Public affairs personnel (to run the technical review committee/restoration advisory boards or handle media inquiries).

2.14.1.2. Defense Environmental Restoration Account funds Air Force Government civilian employee positions in direct support of the Installation Restoration Program, including: Lawyers. Public Affairs Specialists. Contracting officers and specialists. Environmental specialists and engineers. Physical and analytical scientists. Any other position supported by the MAJCOM Installation Restoration Program Manager or equivalent and adequately justified in Program Element Code 78008f with command remarks code "DERA."

2.14.1.3. Installation Restoration Program manager can fully or partially fund the positions on a reimbursable basis, if the position has some duties or time spent supporting Defense Environmental Restoration Account activities.

2.14.1.4. The manpower narrative will only address Air Force Government civilian employees.

2.14.1.5. Record all validated Defense Environmental Restoration Account funded positions on the unit manpower document in program element code 78008f, with command remarks code "DERA."

2.14.2. Allowable Defense Environmental Restoration Account Manpower Expenses:

2.14.2.1. Use Defense Environmental Restoration Account funding for these items (document them separately in funding requests):

Salaries.

Benefits.

Awards.

Moving Expenses, including realtor's fees.

2.14.2.2. Use Defense Environmental Restoration Account funding for backfilling military positions when the military individual is reassigned to work the Installation Restoration Program, in a Defense Environmental Restoration Account authorized/funded position. Normally, this individual will have previously been assigned to another position within the environmental flight (Environmental Compliance, Conservation Resources, or Pollution Prevention).

2.14.2.2.1. Identify and highlight these individuals on the manpower narrative documentation.

2.14.2.2.2. Personnel backfilling these military positions must be Government civilian employees, not independent contractors.

2.14.2.2.3. Keep a separate account for personnel costs of full-time Defense Environmental Restoration Account-funded positions and partially funded, reimbursable positions that have some Defense Environmental Restoration Account-related duties.

2.14.3. Allowable Defense Environmental Restoration Account Management Support Expenses:

2.14.3.1. Defense Environmental Restoration Account funding is allowed for these management line items: Travel for Air Force civilian employees who work on the Cleanup Program at the base, command, agency or center, Air Staff, or Secretariat. Include related administrative expenses (computers, equipment, and so on) highlighted separately. Travel for technical/contractors support of the Cleanup Program. Management Action Plan (MAP) preparation. NOTE: Use of the Installation Restoration Program Information Management System (IRPIMS), sampling and analysis, and Supervision, Inspection and Overhead are considered project expenses (for example, remedial investigation/feasibility study, remedial design and so on) rather than management expenses.

2.14.4. Management and Management Funding Targets:

2.14.4.1. The target for manpower expenses is 4 percent of an organization's initial, validated priority 1A program.

2.14.4.2. The target for management and manpower expenses combined is 8 percent of an organization's initial validated, priority 1A program.

2.14.4.3. The annual program call from HQ USAF/CEVR details quarterly status reports for management, manpower and non-Air Force Service Center management costs.

2.15. Examples of Cleanup Projects and Services. See attachments 2 and 3.

Chapter 3

ELEMENTS OF THE ENVIRONMENTAL COMPLIANCE PROGRAM BUDGET

3.1. Program Description. The environmental compliance program includes all work necessary to ensure Air Force activities comply with: Applicable Federal, state, interstate, and local environmental regulations and standards. DoD and Air Force environmental policies.

3.2. Appropriations:

3.2.1. These appropriations fund the environmental compliance program:

Operations and Maintenance (3400) (3740) (3840)

Military Construction (3300)(3730) (3830).

Aircraft Procurement (3010).

Missile Procurement (3020).

Other Procurement (3080).

Military Personnel.

Research, Development, Testing, and Evaluation (3600).

Military Family Housing (MFH) (7045).

Defense Business Operations Fund (DBOF).

3.2.2. Program and budget environmental compliance requirements in accordance with the associated rules for each appropriation.

3.2.3. Civil engineering is the lead agency for environmental compliance program consolidation, tracking, and management.

3.3. US and US Territory Environmental Compliance Requirements. The Air Force distinguishes between its recurring and nonrecurring environmental compliance requirements:

3.3.1. Recurring Environmental Compliance Requirements. Environmental Operations and Services (O&S) include: annual "must do" services and projects associated with "keeping the gates open" such as hazardous waste disposal; permit fees; sampling, analysis, and monitoring, and so on.

3.3.2. Nonrecurring Environmental Compliance Requirements. The Air Force divides its nonrecurring environmental compliance requirements (environmental contract services and facility projects) into three levels:

3.3.2.1. Level 1: Fix Noncompliance. Level 1 projects and services seek to correct conditions that are not in compliance with applicable Federal, state, interstate, or local environmental laws. Examples are: Violations of interagency agreements or other signed orders or agreements issued by courts or regulatory agencies. Violations of permit limitations. Violations of Federal, state,

interstate or local environmental laws, substantiated by a Notice of Violation (NOV) or a legal opinion from an Air Force attorney.

3.3.2.2. Level 2: Prevent Noncompliance. Level 2 projects and services seek to meet a compliance deadline or to satisfy DoD or Air Force policies and goals. They represent situations in which existing operations or facilities meet current standards, but require action in order to meet future compliance requirements.

3.3.2.3. Level 3: Beyond Compliance. Level 3 projects and services enhance the environment beyond legal requirements.

3.4. Oversea Environmental Compliance Requirements:

3.4.1. Recurring Requirements. Environmental Operations and Services (O&S) include the same types of operations as described for US territory (see paragraph 3.3.1).

3.4.2. Nonrecurring Requirements. The Air Force divides its nonrecurring overseas environmental compliance requirements in the same manner as its nonrecurring US environmental compliance requirements.

3.4.2.1. Level 1 Requirements:

3.4.2.1.1. Level 1 projects services and services: Correct conditions out of compliance with the Final Governing Standards or the Oversea Environmental Baseline Guidance Document (OEBGD), if there are no Final Governing Standards (see AFI 32-7006, Environmental Programs in Foreign Countries (formerly AFR 19-9). Correct conditions out of compliance with the DoD Final Governing Standards (FGS). Restore contaminated sites posing imminent and substantial endangerment to human health and safety. Restore contaminated sites as needed to sustain current operations. NOTE: If there are no applicable Final Governing Standards for the host nation, use the Oversea Environmental Baseline Guidance Document (OEBGD) in accordance with AFI 32-7006.

3.4.2.2. Level 2 Requirements:

3.4.2.2.1. Level 2 projects and services address: Conditions which will be out of compliance with future requirements of international agreements such as treaties, Status of Forces Agreements (SOFA), or bilateral agreements. Conditions which will be out of compliance with future Final Governing Standards (FGS) or Oversea Environmental Baseline Guidance Document (OEBGD) requirements.

3.4.2.2. Level 3 Requirements. Level 3 projects and services enhance the environment beyond current and future Final Governing Standards (or Oversea Environmental Baseline Guidance Document) requirements. NOTE: Do not use US funds to restore contaminated sites beyond that

needed to eliminate imminent and substantial endangerment to human health and safety or sustain current operations (unless required by international agreement). See AFI 32-7006.

3.5. Examples of Environmental Compliance Projects and Services. See attachment 4.

3.6. Environmental Compliance Program Exclusions. See attachment 5.

3.7. Environmental Compliance Documentation:

3.7.1. Priority Level Identification. Be sure the priority level for each project appears prominently on all documentation to ensure proper validation in the approval process.

3.7.2. Military Construction (MILCON):

3.7.2.1. Tailor all DD Forms 1391 used for environmental compliance projects to specifically communicate the need addressed.

3.7.2.2. In block 11, under the "Project," heading and after the statement on what the project does, include the project's priority in parentheses.

3.7.2.3. Emphasize the project's priority level throughout the entire document. For example, if a Notice of Violation (NOV) or a Federal Facilities Compliance Agreement (FFCA) prompts the project, immediately state this in Block 11 under "Requirement."

3.7.2.4. Note the specific regulation the condition violates or will violate in addition to its umbrella legislation (such as Clean Air Act, Clean Water Act, and so on).

3.7.2.5. Note the compliance deadline.

3.7.2.6. Reference the Federal standard for projects addressing violations of Federal law.

3.7.2.7. Send copies of the applicable regulations to HQ USAF/CEVC for projects addressing violations of state, interstate, and local law.

3.7.2.8. Cite any potential damage to the environment under "Impact If Not Provided." Follow this with any current or projected fines or penalties triggered by missed compliance deadlines.

3.7.2.9. Attach these items to the DD Form 1391: Copies of notices of violation, Federal Facility Compliance Agreements, and so on. Copies of the specific standards violated and test results showing noncompliance with these standards. Any correspondence with environmental regulatory agencies showing the project's priority level.

3.7.3. Operations and Maintenance. Operations and maintenance activities require no specific documentation. The project advocate should have general documentation available to substantiate a priority 1 or priority 2 categorization.

3.8. Reporting Environmental Compliance Requirements:

3.8.1. All installations must submit a 5-year pollution abatement plan that details the actions they plan to take to get into or maintain compliance with environmental standards, prevent pollution, and plan for future environmental needs. The EPA reviews this plan for technical validity and funding adequacy.

3.8.2. Use the Federal Agency Pollution Abatement and Prevention Project Plan (commonly known as the A-106 report) to report all Air Force environmental compliance requirements (other than Operations and Services), per Executive Order 12088, Federal Compliance with Pollution Control Standards, to: EPA. The Office of Management and Budget (OMB). Congress.

3.8.3. Keep the WIMS--ES updated.

3.8.3.1. WIMS--ES automates the A-106 reporting process by providing a database of all past, present, and future Air Force actions taken to meet environmental standards.

3.8.3.2. HQ USAF/CEV uses the WIMS--ES A-106 database to develop the Air Force's budget for environmental projects.

Chapter 4

ELEMENTS OF THE CONSERVATION RESOURCES PROGRAM BUDGET

4.1. Program Description. The cultural resources program ensures the protection of natural and cultural resources through compliance with environmental laws and standards and through effective project planning.

4.2. Appropriations:

4.2.1. A variety of sources fund cultural resources projects, including:

- Operations and Maintenance (3400) (3740) (3840).
- Research, Development, Testing, and Evaluation (3600).
- Military Construction (3300) (3730) (3830).
- Military Family Housing (MFH) (7045).
- Legacy Resource Management Program.
- Forestry.
- Fish & Wildlife.

4.2.2. Program and budget cultural resources requirements in accordance with the associated rules for each appropriation.

4.2.3. Civil engineering is the lead agency for cultural resources program consolidation, tracking, and management.

4.3. US and US Territory Cultural Resources Requirements. Categorize these requirements using the environmental compliance definition discussed in paragraph 3.3.

4.4. Oversea Cultural Resources Requirements. Categorize these requirements using the environmental compliance definitions discussed in paragraph 3.4.

4.5. Examples of Cultural Resources Projects and Services. See attachment 6.

4.6. Cultural Resources Program Exclusions. See attachment 7.

4.7. Cultural Resources Documentation. Document using the environmental compliance guidance discussed in paragraph 3.7.

4.8. Reporting Cultural Resources Requirements. Report these requirements using the environmental compliance guidance in paragraph 3.8.

Chapter 5

ELEMENTS OF THE POLLUTION PREVENTION PROGRAM BUDGET

5.1. Program Description. The pollution prevention program includes all work necessary to eliminate or reduce the Air Force's undesirable impacts on human health and the environment, in regards to both its processes, practices and the products it uses.

5.2. Appropriations:

5.2.1. The pollution prevention program receives funds from a variety of sources, including:
Military Construction (3300).
Operations and Maintenance (3400).
Research, Development, Testing, and Evaluation (3600).
Aircraft Procurement (3010).
Missile Procurement (3020).
Other Procurement (3080).

5.2.2. Program and budget pollution prevention project requirements in accordance with the associated rules for each appropriation.

5.2.3. Since the pollution prevention program involves all Air Force areas, functional offices of primary responsibility (OPR) are responsible for requirement advocacy.

5.2.4. Civil engineering is the lead agency for pollution prevention program consolidation, tracking, and management.

5.2.5. Do not use nonappropriated resources (such as personnel and equipment) to subsidize a Qualified Recycling Program (QRP).

5.3. US and US Territory Pollution Prevention Requirements. Separate pollution prevention requirements into the following recurring and nonrecurring categories.

5.3.1. Recurring Requirements. Pollution Prevention Operations and Services (O&S) include annual "must do" services and projects associated with "keeping the gates open" such as management plans, baseline surveys, and so on.

5.3.2. Nonrecurring Requirements:

5.3.2.1. Level P1: Ozone Depleting Chemical (ODC) and Legal Requirements. Level P1 projects and services seek to: Eliminate dependence on ozone depleting chemicals. Satisfy pollution prevention Federal, state or local laws and regulations. Satisfy pollution prevention Executive Orders.

5.3.2.2. Level P2: Meet Future Air Force Goals, Policies, and Legal Requirements. Level P2 projects and services seek to meet future Air Force goals, policies, and legal requirements (such as laws, executive orders, and so on). These projects represent situations in which existing operations, programs, and facilities meet current standards, but require action in order to meet future Federal or DoD legal requirements, Air Force Pollution Prevention Action Plan goals, objectives, and sub-objectives.

5.3.2.3. Level P3: Beyond Air Force Goals and Legal Requirements. Level P3 projects and services go beyond Air Force Pollution Prevention Action Plan goals, DoD goals, and legal requirements.

5.4. Oversea Pollution Prevention Requirements. Categorize these obligations using the pollution prevention definitions discussed in paragraph 5.3.

5.5. Examples of Pollution Prevention Projects and Services. See attachment 8.

5.6. Pollution Prevention Program Exclusions. See attachment 9.

5.7. Pollution Prevention Documentation:

5.7.1. WIMS--ES Pollution Prevention Module. The WIMS--ES pollution prevention module includes the required pollution prevention documentation.

5.7.2. Military Construction (MILCON). See Section 3.7.2.

5.8. Reporting Pollution Prevention Requirements:

5.8.1. Do not submit proposed pollution prevention projects to HQ USAF/CEVV for line item validation without a corresponding A-106 listing.

5.8.2. WIMS--ES transfers data to the new A-106 record when it accesses the A-106 module. WIMS--ES pollution prevention module includes additional data fields as needed to manage projects.

/s/ JAMES E. McCARTHY, Maj General, USAF
The Civil Engineer

GLOSSARY OF REFERENCES, ABBREVIATIONS, AND ACRONYMS

Section A--References

AFI 32-7006, Environmental Programs in Foreign Countries (formerly AFR 19-9)
AFI 32-7020, Installation Restoration Program Management Guidance
AFI 32-7080, Pollution Prevention Programs (formerly AFR 19-15)

Section B--Abbreviations and Acronyms

Abbreviations and Acronyms Definitions

| | |
|--------|---|
| AF | Air Force |
| AFI | Air Force Instruction |
| AFPD | Air Force Policy Directive |
| CEVR | Environmental Restoration Division |
| CEVV | Pollution Prevention Division |
| DoD | Department of Defense |
| EPA | Environmental Protection Agency |
| MAJCOM | Major Command |
| MAP | Management Action Plan |
| O&S | Operations and Services |
| ODC | Ozone Depleting Chemical |
| OPR | Office of Primary Responsibility |
| RDT&E | Research, Development, Test and Engineering |

EXAMPLES OF CLEANUP PROJECTS AND SERVICES (PRIORITY 1 WORK)

A2.1. Eliminating human exposure to contamination or removing an imminent threat (e.g., providing an alternate water supply).

A2.2. Removing source and free product contamination of National Priority Listed and non-National Priority Listed sites (time sensitive).

A2.3. Taking other actions to promptly stabilize a site or reduce its maintenance costs.

A2.4. Meeting Superfund Amendments and Reauthorization Act, Section 120 requirements and other statutory requirements related to the investigation and cleanup of Defense Environmental Restoration Account eligible sites.

A2.5. Complying with court orders and agreements with regulatory agencies related to current fiscal year funding required to investigate and cleanup Defense Environmental Restoration Account eligible sites (e.g., Federal Facility Agreements and Interagency Agreements, Resource Conservation Recovery Act 3008 (h) consent orders, and so on).

A2.6. Meeting Comprehensive Environmental Response, Compensation and Liability Act, Section 106 (b)(2) and Section 107, natural resource trustee requirements.

A2.7. Taking remedial actions at National Priority Listed sites and Defense Environmental Restoration Account-eligible corrective measures at Resource Conservation Recovery Act corrective action sites with signed permits/orders and schedules.

A2.8. Conducting studies (remedial investigations/feasibility studies) and taking action (remedial design or remedial action) at proposed or listed National Priority Listed and non-National Priority Listed sites with Federal Facility Agreements or schedules.

A2.9. Conducting investigations or studies and taking action at Defense Environmental Restoration Account-eligible Resource Conservation Recovery Act corrective action sites with regulatory agreements and/or schedules.

A2.10. Conducting investigations or studies and taking action at Defense Environmental Restoration Account-eligible underground storage tank sites with regulator agreements or schedules.

A2.11. Conducting preliminary assessments/site investigations to meet Superfund Amendment and Reauthorization Act, Section 120, requirements for the Federal Facilities Hazardous Waste Compliance Docket.

A2.12. Demonstrating innovative and cost-effective cleanup technology at proposed or listed National Priority List sites or state agreement sites.

A2.13. Funding operations, maintenance, and management costs of existing remedial action projects (for up to 10 years).

A2.14. Conducting long-term monitoring at sites which are in the remedial action phase.

A2.15. Preparing and updating Management Action Plans.

A2.16. Funding cooperative agreements with states and territories for technical support services associated with site cleanup (the Army receives funds under the DoD and State Memorandum of Agreement budgets and provides funding for cooperative agreements unless the state has not signed).

A2.17. Supporting the Agency for Toxic Substances and Disease Registry's public health evaluations at National Priority Listed sites.

A2.18. Securing manpower and management staffing and administration funding necessary to support Priority 1 work.

A2.19. Conducting preliminary assessments and site investigations at installations not listed on the Federal Facilities Hazardous Waste Compliance Docket (Superfund Amendment and Reauthorization Act, Section 120).

AFI 32-7001 Attachment 2 9 May 1994

AFI 32-7001 Attachment 3 9 May 1994

EXAMPLES OF CLEANUP PROJECTS AND SERVICES (PRIORITY 2 WORK)

A3.1. Conducting remedial investigations, feasibility studies, remedial designs and remedial actions on sites other than Priority 1.

A3.2. Conducting studies to locate abandoned underground tanks, activities to determine whether they have leaked, and fixing leaks (unless response is incidental to tank replacement).

A3.3. Responding to releases from in service tanks discovered during a tank's initial integrity testing (leak detection monitoring) per Title 40, Code of Federal Regulations (CFR), Section 280 (if testing was conducted before 22 December 93, when the regulation was enacted).

A3.4. Funding studies and other efforts to collect toxicological data and develop methods for determining the risks of exposure to hazardous waste generated by the DoD, including support to the Agency for Toxic Substances and Disease Registry for toxicological profiles of unregulated hazardous substances commonly found on DoD installations, and DoD support to the Environmental Protection Agency for health advisories concerning drinking water contaminants.

A3.5. Undertaking activities to meet DoD obligations at Third Party Sites.

A3.6. Taking action to dispose of real property assets (this does not include activities associated with Base Realignment and Closure Act locations).

AFI 32-7001 Attachment 3 9 May 1994

AFI 32-7001 Attachment 4 9 May 1994

EXAMPLES OF ENVIRONMENTAL COMPLIANCE PROJECTS AND SERVICES

A4.1. US and US Territory Environmental Compliance Operations and Services (O&S):

A4.1.1. Permits and Fees. Including:

- National Pollutant Discharge Elimination System (NPDES) permits.
- Resource Conservation and Recovery Act (RCRA) Part B permits.
- Solid waste landfill permits.
- Underground fuel storage tank permits and fees.
- Air emissions permits and fees.

A4.1.2. Environmental Compliance Personnel:

A4.1.2.1. Permanently assign and code with one of the environmental compliance cost centers and the appropriate program element code (**56f) personnel that spend at least 50 percent of their time performing environmental compliance duties.

A4.1.2.2. HQ and Command personnel retain their ***98 program element code, however, use the suffix "X" to designate HQ and Command environmental compliance personnel.

A4.1.2.3. Track "part-time" environmental compliance manpower (if under the actual time accounting cost system), and account for their expenses under the appropriate environmental compliance program element codes and cost centers.

A4.1.2.4. Requirements also include environmental personnel contract support.

A4.1.3. Environmental Education and Training. Environmental education and training includes the Operations and Maintenance Training Assistance Program (OMTAP).

A4.1.4. Certifications and Licenses. Environmental certifications and licenses, only as part of a mandatory training course.

A4.1.5. Hazardous Waste Management. For example: Waste transportation and disposal. Accumulation point maintenance. Hazardous waste management plan updates. Waste analysis plan and waste stream inventory.

A4.1.6. Sampling, Analysis, and Monitoring. Includes the costs of these items and activities: Collection, analysis, and interpretation of sample results. Collection media (bottles, bags, labels) and preservation chemicals. Collection equipment. Analysis chemicals. Shipping including overnight mail to meet compliance deadlines. Analysis fees including fees from local and central contract laboratories. Data reduction and interpretation. Nonpoint source pollution monitoring. Radon sampling and analysis.

A4.1.7. Hazardous Materials. Hazardous materials disposal.

A4.1.8. Asbestos Surveys, Disposal, and Removal and Remediation Training. Base the funding on where the requirement exists (e.g., housing, research labs).

A4.1.9. Lead-based Paint Training and Certification, Surveys, and Disposal. Base the funding on where the requirement exists (e.g., housing, research labs).

A4.1.10. Underground Storage Tanks. Underground storage tanks (UST) for leaks testing and monitoring.

A4.1.11. Audits. Conducting Environmental Compliance Assessment and Management Program (ECAMP) audits. A4.1.12. Cleanup. Spill cleanup, cleanup supplies, and cleanup equipment (no Installation Restoration Program requirements).

A4.1.13. Document Preparation. Preparation of documents to satisfy congressional reporting requirements and the investigation and reporting of violations of the law.

A4.1.14. Overhead Costs. Other costs, for example: Travel for the environmental program. Supplies and equipment used directly by the environmental program. Design costs for Level 1 or Level 2 projects. Long-term monitoring and other operations and maintenance expenses of long-term cleanup operations not covered by the Defense Environmental Restoration Account.

A4.2. US and US Territory Environmental Compliance Level I Requirements:

A4.2.1. Clean Water Act (CWA). Projects that: Correct waste water discharge violations, including repairs and upgrades of waste water treatment plants, sewage collection systems, and oil/water separators.

Correct sanitary and storm sewer cross connections.

Correct or replace fire training areas that have contaminated ground water or soil.

Reroute industrial building drains from storm water drains to sanitary sewers.

Construct storm water control systems including adequate retention basins, stabilized ditches, and oil/water separators.

A4.2.2. Resource Conservation and Recovery Act (RCRA): Projects that:

Provide impervious secondary containment for bulk fuel storage tanks.

Upgrade hazardous waste storage containers to meet Resource Conservation and Recovery Act standards.

Repair or replace leaking underground fuel storage tanks.

Repair leaking hydrant fueling systems.

Cleanup soil and water contamination from fuel and oil spills (non-Defense Environmental Restoration Account).

A4.2.3. Clean Air Act (CAA). Projects that:

Provide or upgrade air pollution monitoring equipment to meet permit conditions.

Provide air emissions controls to meet emission standards (e.g., for fuel storage tanks, solvent degreasers, painting operation).

Provide vapor recovery systems to meet volatile organic compounds (VOC) emissions standards.

Conduct air emissions inventories.

Complete air pollution episode plans.

A4.2.4. Safe Drinking Water Act (SDWA). Projects that repair or upgrade potable water systems to meet drinking water standards.

A4.2.5. Toxic Substances Control Act (TSCA). Projects that: Remove and retrofit leaking polychlorinated biphenyl (PCB) transformers or PCB-containing items, and clean up PCB spills. Remove or abate lead-based paint as necessary to remedy a health hazard provided hazardous condition not caused by renovation. Remove or abate asbestos as necessary to remedy a health hazard provided hazardous condition not caused by renovation.

A4.2.6. Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). Projects that provide or upgrade pesticide storage, mixing, and preparation facilities to meet Federal Insecticide, Fungicide, and Rodenticide Act.

A4.2.7. Superfund Amendments and Reauthorization Act Title III. Projects, equipment, and supplies to meet requirements of Superfund Amendment and Reauthorization Act Title III.

A4.3. US and US Territory Environmental Compliance Level 2 Requirements:

A4.3.1. Resource Conservation and Recovery Act (RCRA). Projects that: Upgrade nonleaking regulated underground storage tanks to meet the Federal compliance deadline of December 98 for new construction standards or to meet approved state underground storage tank regulations (40 CFR 280). Construct hazardous waste storage facilities to meet future storage regulations. A4.3.2. Clean Air Act (CAA). Projects that construct waste incinerators to meet future emissions criteria.

A4.3.3. Projects To Satisfy Air Force: Meet radon abatement requirements. Base the funding on where the requirement exists (i.e., housing, research labs). Dispose of all nonleaking PCB materials.

AFI 32-7001 Attachment 4 9 May 1994

AFI 32-7001 Attachment 5 9 May 1994

ENVIRONMENTAL COMPLIANCE PROGRAM EXCLUSIONS

A5.1. Nonenvironmental Projects. The environmental compliance program does not fund projects primarily justified for nonenvironmental reasons (i.e., upgrade of a hydrant refueling system to increase capacity or to extend the life of the system), even if they must satisfy environmental standards within their scope. This includes meeting environmental standards as part of a renovation (e.g., friable asbestos or lead-based paint hazards resulting from renovation).

A5.2. Replacing Underground Storage Tanks. The environmental compliance program does not fund replacement of one underground storage tank with a larger one in order to meet mission requirements, even though the new unit must meet environmental standards for underground storage tanks.

A5.3. Upgrades. The environmental compliance program does not fund costs associated with the upgrade alteration of an industrial process (i.e., modernization or adaptation of processing equipment at a government-owned, contractor operated facility). Such costs may be eligible for pollution prevention funding.

A5.4. Projects to Meet Occupational Safety Health Administration Regulations. The environmental compliance program does not fund Air Force activities meant solely to comply with Occupational Safety Health Administration (OSHA) standards or regulations.

A5.5. Water Waste Treatment. The environmental compliance program does not fund recurring waste water or industrial waste water treatment plant expenses or personnel costs associated with waste water treatment.

A5.6. Solid Waste Disposal. The environmental compliance program does not fund solid waste disposal expenses, including tipping fees and on-base landfill operations.

A5.7. Environmental Certifications and Licenses. The environmental compliance program does not fund certifications/licenses unless part of a mandatory training course.

A5.8. Radioactive Waste Disposal. The environmental compliance program does not fund radioactive waste disposal.

AFI 32-7001 Attachment 5 9 May 1994

AFI 32-7001 Attachment 6 9 May 1994

EXAMPLES OF CULTURAL RESOURCES PROJECTS AND SERVICES

A6.1. US and US Territory Cultural Resources Operations and Services:

A6.1.1. Personnel Expenses. Permanently assign personnel spending at least 50 percent of their time performing cultural resources duties and code them with one of the environmental compliance cost centers and the appropriate program element code (XXX56f).

A6.1.1.1. Headquarters and Command personnel retain their XXX98 program element code.

A6.1.2. Education and Training. Cultural resources funds environmental education and training, including the DoD Cultural and Natural Resources Management Course.

A6.1.3. Certifications and Licenses. Cultural resources funds environmental certification and licenses only as part of a mandatory training course. A6.1.4. Environmental Impact Analysis Process (EIAP). Cultural resources funds projects in response to environmental impact analysis process recommendations, including Air Installation Compatible Use Zone (AICUZ) noise standards. The applicable law is the National Environmental Policy Act (NEPA).

A6.1.5. Natural Resources Protection. Cultural resources funds projects to protect natural resources including: Long-term monitoring of endangered species and activities designed to help their recovery. Actions resulting from Endangered Species Act Section 7 consultations. Monitoring or restoring wetlands. Updating inventories for endangered species, wetlands, and cultural resources. Providing protection and monitoring associated with special Presidential and Congressional interest, such as coastal zone and Chesapeake Bay protection. Providing annual reviews and updates of environmental plans.

A6.1.6. Cultural Resources Protection. Cultural resources funds projects to protect cultural resources including: Funding for curation of archaeological material. Funding for National Historic Preservation Act, Section 106 consultations.

A6.1.7. Documentation Preparation. Cultural resources funds the preparation of documents to satisfy congressional reporting requirements and the investigation and reporting of violations of the law. A6.1.8. Surveys. Cultural resources funds Environmental Baseline Surveys. A6.1.9. Integrated Natural Resource Management Plans. Cultural resources funds updates to Integrated Natural Resource Management Plans.

A6.1.10. Overhead Costs. Cultural resources funds other overhead costs, including: Travel for the environmental program. Supplies and equipment used directly by the environmental program.

A6.2. US and US Territory Cultural Resources Level 1 Requirements:

A6.2.1. Endangered Species Act. Cultural resources funds projects to conduct endangered species surveys and protect endangered species and aid their recovery.

A6.2.2. Executive Order 11988 ("Floodplain Management") and Executive Order 11990 ("Protection of Wetlands"). Cultural resources funds projects to: Conduct wetlands and flood plains surveys and inventories. Protect, develop, monitor, and restore (this requirement can result from Section 404 of the Clean Water Act).

A6.2.3. National Historic Preservation Act and Archaeological Resources Protection Act. Cultural resources funds archaeological and historic resources inventories: To explore scientifically valuable archaeological sites and properties eligible for listing in the National Register of Historic Places. To develop nominations for listing historic properties in the National Register of Historic Places. To support historic property nominations. To protect archaeological and historic resources, including memoranda of agreement and programmatic agreements.

A6.2.4. Sikes Act. Cultural resources funds projects to develop integrated natural resources management plans (fish and wildlife, forestry, agricultural outleasing, and land and management sections).

A6.2.5. Native American Graves Protection and Repatriation Act. Cultural resources funds projects to inventory exhumed Native American remains and cultural items.

A6.3. US and US Territory Cultural Resources Level 2 Requirements:

A6.3.1. Native American Graves Protection and Repatriation Act. Cultural resources funds projects to inventory collections and to maintain holdings of Native American human remains and associated funeral objects. Identify the geographic and cultural affiliation of such items before the November 1995 deadline.

A6.4. US and US Territory Cultural Resources Level 3 Requirements:

A6.4.1. Recurring Requirements. Annually recurring requirements associated with enhancing the environment. These projects may also receive Legacy Resource Management Program funding.

A6.4.1.1. Natural Resources Management. These facilities and activities receive cultural resources funding: Nature centers. Interpretive displays and nature trails. Wildlife observation areas. Informational brochures. Conservation education.

A6.4.1.2. Cultural Resources Management. These activities and facilities receive cultural resources funding: Interpretive displays of cultural artifacts. Informational brochures. Public awareness programs. Researching and documenting the history of Air Force base lands.

AFI 32-7001 Attachment 6 9 May 1994

AFI 32-7001 Attachment 7 9 May 1994

CULTURAL RESOURCES PROGRAM EXCLUSIONS

A7.1. Acquisition Environmental Impact Analysis Process. The cultural resources program does not fund weapon system acquisition environmental impact analysis process costs.

A7.2. Base Realignment And Closure Environmental Impact Analysis Process. The cultural resources program does not fund base realignment and closure environmental impact analysis process costs.

A7.3. Environmental Certifications and Licenses. The cultural resources program does not fund certifications/licenses unless part of a mandatory training course.

AFI 32-7001 Attachment 7 9 May 1994

AFI 32-7001 Attachment 8 9 May 1994

EXAMPLES OF POLLUTION PREVENTION PROJECTS AND SERVICES

A8.1. US and US Territory Pollution Prevention Operations and Services:

A8.1.1. Pollution Prevention Manpower:

A8.1.1.1. Permanently assign personnel spending at least 50 percent of their time performing pollution prevention duties and code them with one of the pollution prevention cost centers and the appropriate program element code (PEC 78054f).

A8.1.1.2. Headquarters and Command personnel retain their ***98 program element code. Add the suffix "x" to designate Headquarters and Command pollution prevention personnel. A8.1.2. Management Plans. The pollution prevention program funds periodic updates of management plans and analyses of pollution prevention initiatives required by law or policy.

A8.1.3. Surveys. Baseline survey updates.

A8.1.4. Recycling Programs. Recurring operating costs. See AFI 32-7080, Pollution Prevention Programs, for requirements on proceeds received from the program.

A8.1.5. Composting Programs. Operating costs associated with a composting program.

A8.1.6. Overhead Costs. See A6.1.10.

A8.1.7. Education and Training Programs. The pollution prevention program funds education, training and awareness programs.

A8.1.8. Operations and Maintenance. Recurring costs for pollution prevention tracking systems and hazardous material pharmacies.

A8.1.9. Opportunity Assessments. The pollution prevention program funds pollution prevention opportunity assessments.

A8.1.10. Hazardous Materials Identification. Efforts identifying hazardous materials in: Technical Orders. Military Specifications (MILSPEC). Guide specs. Military Standards (MILSTD). Other documents which provide technical requirements.

A8.1.11. Acquisition Infrastructure Program Costs. Projects not associated with any one acquisition program (e.g., Life Cycle Cost Study) but support the infrastructure of many programs. Projects will not be accomplished by program offices.

A8.1.12. Assessment and Review. Systematic environmental assessment and review procedures with the objective of identifying ways to reduce or eliminate waste.

A8.1.13. Certifications and Licenses. Environmental certifications and licenses, only as part of a mandatory training course.

A8.2. US and US Territory Level P1 Requirements:

A8.2.1. Ozone Depleting Chemicals (ODC). These projects reduce or eliminate the Air Force's demand of ozone depleting chemicals. Typical projects include: Halon and refrigerant recovery, recyclers, and reclamation costs. Air conditioner purge/units/heaters. Aqueous parts washers. Storage containers for ozone depleting chemical banking. Leak detectors and automatic shutoff valves. Switching air conditioners from chlorofluorocarbon (CFC) use to ydrochlorofluorocarbon use (if cost effective, no ozone depleting chemical inventory exists, and no recyclable ozone depleting chemical market exists).

A8.2.2. Vehicles that Use Alternative Fuels. The pollution prevention program funds the initial costs associated with the conversion of vehicles to run on alternative fuels and for required facilities to meet Energy Act and executive order requirements relating to alternative fuels.

A8.2.3. Recycling Start-up Costs. Costs of starting recycling programs required by Executive Order 12873 and meeting the criteria in AFI 32-7080.

A8.2.4. Composting Start-up Costs. The pollution prevention program funds the costs of starting legally required composting programs.

A8.2.5. Management Plans. The pollution prevention program funds initial development of pollution prevention management plans required by law.

A8.3. US and US Territory P2 Requirements:

A8.3.1. Vehicles the Use Alternative Fuels. The pollution prevention program funds additional purchases of alternative fuel vehicles (i.e., no mandate by law or supportable as an operations and services expense).

A8.3.2. Hazardous Waste Minimization Equipment and Projects.

A8.3.3. Water Pollution Minimization Equipment and Projects.

A8.3.4. Air Emissions Reduction Equipment and Projects.

A8.3.5. Hazardous Material Tracking and Control Systems (Hazardous Material Pharmacies).

A8.3.6. Environmentally Acceptable Materials and Processes. The pollution prevention program funds projects to find acceptable materials and processes to replace existing materials and processes in facilities.

A8.3.7. Depot-Level Equipment Projects:

A8.3.7.1. Use prototype application or study type depot level equipment projects in determining if a process is suitable for production level.

A8.3.7.2. Identify the project as a Prototype or Study in the project description.

A8.3.7.3. Do not use Depot Business Maintenance Area funds for these project types.

AFI 32-7001 Attachment 8 9 May 1994

AFI 32-7001 Attachment 9 9 May 1994

POLLUTION PREVENTION PROGRAM EXCLUSIONS

A9.1. Nonenvironmental Projects. The pollution prevention program does not fund projects primarily justified for nonenvironmental reasons, even if they must satisfy environmental requirements within their scope.

A9.2. Maintenance Projects. The pollution prevention program does not fund projects to remedy poor infrastructure maintenance.

A9.3. Air Conditioning Projects. The pollution prevention program does not provide funds to replace or retrofit air conditioning units using chlorofluorocarbon with units using hydrochlorofluorocarbons unless criteria in attachment 8 is met.

A9.4. Halon Projects. The pollution prevention program does not fund projects to replace halon fire protection systems with nonhalon systems.

A9.5. Fire Extinguisher Projects. The pollution prevention program does not fund projects to replace hand-held halon fire extinguisher projects.

A9.6. Depot-Level Equipment:

A9.6.1. The Air Force established the Defense Business Maintenance Area (DBMA), in the Defense Business Operations Fund, to pay for the replacement of depot-level equipment costing more than \$25,000.

A9.6.2. Budget equipment meeting this definition through the Depot Business Maintenance Area capital asset budget.

A9.7. Acquisition Projects. The pollution prevention program does not fund acquisition projects associated with any one acquisition program.

A9.8. Military Construction Energy Conservation Projects.

A9.9. Environmental Certifications and Licenses. The pollution prevention program does not fund certifications/licenses unless part of a mandatory training course.

ENVIRONMENTAL PROTECTION COMMITTEES

This instruction implements AFPD 32-70, Environmental Quality, by establishing Environmental Protection Committees (EPC) to ensure a systematic, interdisciplinary approach to achieve and maintain environmental quality in the Air Force.

SUMMARY OF CHANGES

This is the initial publication of AFI 32-7005, substantially revising AFR 19-8. It aligns with AFPD 32-70.

Section A--How To Use This Instruction

1.0 Background. As the senior Air Force environmental steering group, the EPC reviews policies and programs, monitors progress, and advises leadership. EPCs oversee compliance with AFPD 32-70 and its implementing instructions.

2.0 Concept:

2.1. This instruction is intended to provide major commands (MAJCOM) and installations with a framework to oversee the Air Force environmental program according to AFPD 32-70.

2.2. MAJCOMs provide additional implementing guidance in supplemental publications to this instruction. The MAJCOM supplement must identify responsible offices and include implementing guidance to comply with this instruction.

3.0 Responsibilities and Air Force EPC Membership. Each of the following offices identifies, in writing, a primary member (a general officer or a civilian of similar status, if available), and an alternate member to the HQ USAF EPC. EPC members ensure that their areas of responsibility are considered in the interdisciplinary approach required to ensure proper consideration of environmental quality. The chairs may ask other experts to join the EPC, as needed.

3.1. Headquarters United States Air Force (HQ USAF): The Assistant Secretary of the Air Force for Manpower, Reserve Affairs, Installations, and Environment (SAF/MI) representative and the Assistant Vice Chief of Staff (HQ USAF/CVA) Co-Chair the EPC. The Assistant Secretary for Acquisition (SAF/AQ). The Assistant Secretary for Budget (SAF/FM). The General Counsel (SAF/GC). The Inspector General (SAF/IG). Office of Legislative Liaison (SAF/LL). Office of

Public Affairs (SAF/PA). The Civil Engineer (HQ USAF/CE) is the EPC Executive Secretary. Deputy Chief of Staff (DCS) Logistics (HQ USAF/LG). Director, Programs and Evaluation (HQ USAF/PE). DCS Plans and Operations (HQ USAF/XO). Chief of Safety (HQ USAF/SE). The Judge Advocate General (HQ USAF/JA).

Supersedes AFR 19-8, 19 August 1988.

Certified by: HQ USAF/CEV (Col Peter Walsh)

OPR: HQ USAF/CEVP (Mr Jack Bush)

Pages: 2/Distribution: F

DCS Personnel (HQ USAF/DP).

Services (HQ USAF/MW).

DCS Command, Control, Communications and Computers (HQ USAF/SC).

The Surgeon General (HQ USAF/SG).

Chief of Air Force Reserve (HQ USAF/RE).

Director, Air National Guard (NGB/CF).

Director, Air Force Base Conversion Agency (AFBCA/DR).

3.2. MAJCOM Responsibilities. All references to MAJCOMs in this instruction include the Air National Guard Readiness Center and other agencies designated as "MAJCOM equivalent" by HQ USAF. The MAJCOM EPC membership will mirror those of HQ USAF. The vice commander is the chairperson, or will designate a general officer to serve as the EPC chairperson. Each staff office designates, in writing, a primary and an alternate member with decisionmaking authority to serve on the EPC. The EPC chairperson designates other members to serve on the EPC as required. MAJCOMs will ensure EPCs are established at installations.

3.3. Installation Responsibilities. Air Force installations must comply with the EPC requirements outlined in section B. In addition, the installation EPC membership and responsibilities will mirror that of the MAJCOM EPC. The EPC must include representatives from tenant organizations, including the Defense Reutilization and Marketing Office and the Army and Air Force Exchange Service. For closure bases, the operating location site manager of the Air Force Base Conversion Agency (AFBCA) is a member. Contractors operating government facilities may not serve as members.

Section B--Requirements and Records

4.0 Requirements:

4.1. EPCs: Ensure a systematic, interdisciplinary approach to environmental quality and integrate this approach into planning and decision-making.

Act as the primary executive steering group for all environmental cleanup, compliance, conservation and pollution prevention.

4.2. HQ USAF EPC: Meets at least semi-annually or at the direction of the chairperson. Reviews adequacy of policies, resources and performance in meeting environmental goals and makes recommendations on changes required. Reviews environmental legislation and regulations and approves implementing policies.

4.3. MAJCOM and Installation EPCs: Meet at least quarterly or at the direction of the chairperson. Review and approve environmental impact analysis on proposed actions and forwards to the decision-maker. Review environmental policy, resources, and performance and make recommendations on changes required. Ensure appropriate training and manpower exist to meet environmental responsibilities.

5.0 Preparing Minutes. Within 30 days, the meeting secretary prepares minutes of EPC meetings. The minutes state the substance of all discussions and decisions.

5.1. Any open enforcement actions, unfulfilled compliance agreements, administrative orders, and similar enforcement actions must be part of the minutes. Identify these open items until they are closed.

5.2. Offices of primary responsibility must comment on all actions taken to resolve problems since the last meeting. The minutes summarize these comments.

5.3. Attachments to minutes will include letters from environmental regulatory agencies such as inspection reports; summaries of environmental standards exceeded; and current compliance schedules which indicate the base's or MAJCOM's progress in meeting schedules.

5.4. The executive secretary of the base EPC sends a copy of the minutes to the higher headquarters EPC, the appropriate Air Force Regional Compliance Office, all staff and other interested parties.

5.5. The executive secretary keeps EPC minutes and related documents for at least 10 years, per AFI 37-138, Records Disposition--Responsibilities and Procedures (formerly AFR 12-50, Volume 1).

/s/ JAMES E. McCARTHY, Maj General, USAF
The Civil Engineer

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR COMBAT COMMAND
LANGLEY AIR FORCE BASE, VIRGINIA

MEMORANDUM FOR ACC Civil Engineer Squadrons/CC 19 Sep 96

FROM: HQ ACC/CEO
129 Andrews Street, Suite 102
Langley AFB VA 23665-2769

SUBJECT: FY 96 Report - DoD Pest Management Measures of Merit

1. The Secretary of Defense established DOD-wide Measures of Merit (MOM) in 1993 to ensure that environmentally sound installation pest management programs are being implemented. These measures and goals are as follows:

- a. Measure of Merit 1 - Installation Pest Management Plans. By the end of FY 97, 100 percent of all DoD installations will have pest management plans prepared, updated, and reviewed by their respective MAJCOM Entomologist.
- b. Measure of Merit 2 - Annual Amount of Pesticide Applied. By the end of FY 2000, the amount of pesticide applied annually on DoD installations will be reduced by 50 percent from the FY 93 baseline in pounds of active ingredient.
- c. Measure of Merit 3 - Installation Pesticide Applicator Certification. By the end of FY 98, 100 percent of all DoD installation pesticide applicators will be properly certified within two years of employment. (Note: The following interim policy also applies to Measure of Merit 3. All installation pesticide applicators will be trained and certified within two years of employment. Also, all contractor employees performing pest management work on DoD installations shall be certified under a state or Environmental Protection Agency (EPA) Plan accepted in the state in which the work is conducted)

2. Please provide the information on the attached FY 96 report for your installation and forward or FAX (DSN 574-5363 to the attention of Mr. Teig) your report to us by 31 Oct 96. For additional information or guidance, please contact Mr. Donald Teig or Mr. Jim Sabo, ACC/CEOO, at DSN 574-2764 or (804) 764-2764.

PAUL A. PARKER
Chief, Operations Division

Attachment:
Pest Management Measures of Merit - FY95 Report

PEST MANAGEMENT MEASURES OF MERIT - FY 96 REPORT

1. Installation: _____

2. Point of Contact: _____

3. Complete Address: _____

4. DSN Phone Number: _____

Commercial Number: _____

FAX Number: _____

5. Measure of Merit 1:

Has the Installation Pest management plan been updated for FY 97 and reviewed by the HQ ACC Entomologist? YES NO (circle answer)

6. Measure of Merit 2:

Enter the total pounds of pesticide active ingredient (see note) applied in FY 96: _____ Pounds

Note: Pesticides include all insecticides, herbicides, fungicides and rodenticides applied during FY96 by all sources (in-house, contract, etc.) for any purpose including, but not limited to, grounds maintenance, entomology, forestry, agronomy or other pest management operations, golf course maintenance, and MFH maintenance. Also be sure to include aquatic and aerial application.

7. Measure of Merit 3: The following interim policy also applies to Measure of Merit 3. All installation pesticide applicators will be trained and certified within two years of employment. Also, all contractor employees performing pest management work on DoD installations shall be certified under a state or Environmental Protection Agency (EPA) Plan accepted in the state in which the work is conducted. This interim policy will be included in the revision of DoD Directive 4150.7, DoD Pest Management Program.

a. Enter the total number of DoD (military and civilian) pesticide applicator personnel who have been employed more than two years: _____

b. Enter the total number of DoD (military and civilian) pesticide applicator personnel who have been employed more than two years that are DoD certified: _____

c. Enter the total number of contract pesticide applicator personnel: _____

d. Enter the total number of contract pesticide applicator personnel who are certified by the state: _____

For additional information or guidance, please contact Mr. Donald Teig or Mr Jim Sabo, ACC/CEO, at DSN 574-2764 or (804) 764-2764. FAX DSN 574-5363

MEMORANDUM FOR ACC BASE CIVIL ENGINEERS

14 May 96

FROM: HQ ACC/CEV
129 Andrews Street Ste 102
Langley AFB VA 23665-1211

SUBJECT: Halon 1301 and Halon 1211 Guidance

1. The Air Force Audit Agency has released their report on the Air Force Management of Ozone Depleting Substances (ODS). The report contained numerous findings related to the implementation of established ODS policies and directives. As a result, please ensure your installation has fully implemented all of the following:

a. Identify all facility Halon 1301 systems on base. Your installation Halon Management Plan should identify all such systems and document your strategy for replacement. (References: HQ AFCESA *ETL 95-1, Halon 1301 Management Planning Guidance*, 12 May 95 and SECAF/CSAF *Air Force Pollution Prevention Strategy*, 24 Jul 95)

b. All facility Halon 1301 fire suppression systems are to be placed on manual operation. If your installation believes the system should remain in automatic mode, submit a waiver request with full justification to HQ USAF/CEVQ, with a copy sent to HQ AFCESA/CEXF. (Reference: SECAF/CSAF Policy, *Air Force Ban on Purchase of Ozone Depleting Chemicals*, 7 Jan 93, Attachment 1)

c. Test halon tanks for leaks semi-annually. Guidance on testing requirements and procedures is in the Mar 96 A-Gram published by HQ AFCESA. (Reference: HQ USAF/CEV Memorandum, *Air Force Audit on Ozone Depleting Substances*, 7 Mar 96, Attachment 2)

d. Current Air Force guidance specifies that halon portable fire extinguishers be used only in mission critical applications, though no clear definition of mission critical applications is given. Mission critical applications are now defined as:

1. 150 pound flightline extinguishers supporting parked aircraft; or
2. Hand-held extinguishers physically located on large frame aircraft.

Your installation's Halon Management Plan should document your strategy to replace all other halon extinguishers. (References: HQ USAF/CEV Memorandum, *Air Force Audit on Ozone Depleting Substances*, 7 Mar 96 and SECAF/CSAF *Air Force Pollution Prevention Strategy*, 24 Jul 95)

e. Halon 1211 is required to be removed from fire fighting vehicles. It is not sufficient to deactivate the halon systems - the halon must be removed and transferred to proper cylinders to prevent accidental releases. (Reference: HQ USAF/CE Policy, *Air Force Policy on the Acquisition and Use of Halon 1211*, 18 May 92, Attachment 3)

f. Prepare a maintenance plan for halon recharge/recovery equipment and keep a log of maintenance performed. Procedures to follow for accomplishing this are in the HQ AFCESA Mar 96 A-Gram. (Reference: HQ USAF/CEV Memorandum, *Air Force Audit on Ozone Depleting Substances*, 7 Mar 96)

2. The Air Force Audit Agency also determined that many installations had excess halons on base. In some cases this was because civil engineering did not know a stock existed in base supply, or the base was not aware of established turn-in procedures for excess halon. ETL 95-1 contains procedures for identifying all halon on an installation, to include halon within systems, CE and base supply. ETL 95-1 also contains procedures for determining a sufficient backup stock level and how to dispose of the excess.

3. My point of contact for halon management is Ms. Donna Tripp, ACC CES/ESC, DSN 574-4430 or 3553. If you have questions regarding Halon 1301, you may contact Mr. Jim Crawford, ACC CES/ESO, DSN 574-4333, or for questions relating to Halon 1211, please contact CMSgt Jim LaConte, HQ ACC/CEXF, DSN 574-7114.

MARCOS J. MADRID, Col, USAF
Chief, Environmental Programs Division

Attachments:

1. Air Force Ban on Purchase of Ozone Depleting Chemicals, 7 Jan 93
2. Air Force Audit on Ozone Depleting Substances Memorandum, 7 Mar 96
3. Air Force Policy of the Acquisition and Use of Halon 1211, 18 May 92

DEPARTMENT OF THE AIR FORCE

Headquarters Air Force Materiel Command
Wright-Patterson Air Force Base Ohio

7 Mar 1996

MEMORANDUM FOR SEE DISTRIBUTION

FROM: HQ AFMC/LG-EV
4375 Chidlaw Road, Suite 6
Wright-Patterson AFB OH 45433-5006

SUBJECT: Turn-In and Requisitioning Procedures for the Defense Reserve (Supersedes
HQ AFMC/LG Memo, 19 Oct 94)

1. Attached is the updated procedures for turning in and requisitioning Ozone Depleting Substances from the Defense Reserve. Please distribute these instructions to your bases' hazardous material pharmacy or supply activity.

2. If you have any questions please contact Mr. Michael J Bickett, Mr. Alex Briskin, Ms. Dorice Griffin, Mr. Tom Lornman, HQ AFMC/LG-EV, DSN 787-3487.

FOR THE COMMANDER

//signed//
DEBORA MEREDITH
Chief, Logistics Environmental Office

Attachment:
Turn-in and Requisitioning Procedures

cc:
USAF/LGMM (EARL MILES)
DSCR-RP (STEVE MINUS)
SAF/AQRE (KENNETH DORMER)
AFCESA/DF (MILT PUCKETT)
HQ USAFA/LGS (TERRY VEN ROY)

**OZONE DEPLETING SUBSTANCES (ODSs)
AIR FORCE TURN-IN AND REQUISITIONING PROCEDURES
FOR THE ODS DEFENSE RESERVE**

BACKGROUND INFORMATION

The ODS Defense Reserve was established for DoD mission-critical weapon systems support. It will supply refrigerants, Halons, and solvents when commercial sources are not available. The Defense Reserve is managed by the Defense Logistics Agency (DLA) through Defense Supply Center, Richmond (DSCR). The Defense Reserve will remain active until all weapon systems using ODSs are replaced or retired.

It is imperative that the Air Force (AF) recover and turn-in to the Defense Reserve all excess refrigerants, Halons, and solvents for the establishment of the Defense Reserve. DSCR will stock and accept for turn-in to the Defense Reserve the chemicals listed below. DSCR will not accept refrigerant blends, but will accept contaminated refrigerants and Halons that can be reclaimed into a pure condition. DSCR will not accept excess solvents unless they are returned in their original, unopened containers.

Halons: 1202, 1211, 1301

Refrigerants(R): Chlorofluorocarbon (CFC), -11, -12, -114, -500, -502

Solvents: CFC -113; 1,1,1 Trichloroethane (TCA); *Methyl Chloroform (MCF);

*Note, Methyl Chloroform (MCF) is the chemical equivalent of 1,1,1 Trichloroethane (TCA)

This information enhances and should be used in conjunction with other ODS policy guidance. This package supersedes the following guidance outlined in these messages and letter:

- a. HQ AFMC/LGS msg, 231811Z JUN 93, 3-part message.
- b. HQ AFMC/LGS ltr, 28 Oct 93, Subj: Procedures for Returning Ozone Depleting Substances (ODS) to the Defense Reserve.
- c. HQ AFMC/LGS msg, 112033Z APR 94, Subj: Defense Reserve Requisitioning and Turn-in Process Update.
- d. HQ AFMC/LGS msg, 181822Z MAY 94, Subj: Ozone Depleting Chemical Requisition and Turn-in Procedure Update.
- e. HQ AFMC/LG memo, 19 Oct 94, Subj: Turn-in and Requisitioning Procedures for the Defense Reserve.

ODS TURN-IN INFORMATION

To support aggressive turn-in of excess ODSs we recommend a periodic evaluation of past ODS usage to identify potential excesses. When a using organization determines it has excess ODSs, the excess should be turned in to the base Hazardous Material Pharmacy (HMP) or supply. The HMP or supply should determine if another on-base organization can use this excess. If there is no requirement on-base, then contact the MAJCOM Defense Reserve POC (see attachment 1) for possible redistribution of excesses within the MAJCOM. When another Air Force organization has a requirement for the excess ODS, the receiving organization should pay for shipment from the sending installation if redistribution is authorized. A fund cite must be provided by the receiving organization to the shipping activity prior to shipping. If there are no MAJCOM installations requiring the excess then ship the ODS to the Defense Reserve. Refrigerants, Halons and unopened solvents shall not be sold (or given away) to private industry or turned in to the Defense Reutilization and Marketing Office (DRMO).

I. Policy and Procedures

- a. The organization should contact its base HMP or supply account for possible redistribution of excess ODSs on-base or within the MAJCOM.
- b. If there is no on-base or MAJCOM requirement the excess ODSs should be direct shipped to the Defense Reserve according to normal turn-in procedures. Regulations governing the turn-in of ODSs are detailed below in paragraph II, ODS Supply and Transportation Guidance.
- c. The DSCR requires no authorization/pre-notification when turning in ODSs to the Defense Reserve. Various types of cylinders containing ODSs will be accepted in the Defense Reserve to include fire extinguishers and spheres.
- d. Government recovery cylinders for refrigerants and Halons turned in to the Defense Reserve are available free of charge through DSCR. Only recovery cylinders should be used for recovering refrigerants and Halons from systems. They can be requisitioned by following normal MILSTRIP procedures and including a "2E" advice code on the requisition. However, the Defense Reserve is capable of accepting any type of cylinder, including contractor-owned cylinders. The Defense Reserve will return contractor-owned cylinders when this is necessary. The Defense Reserve will accept the prescribed refrigerants and Halons in any condition and will reclaim them to meet MILSPEC and MILSTD requirements. Table I on the following page contains NSNs for requisitioning empty recovery cylinders from DSCR. The Government cylinders used for recovering CFC refrigerants are painted orange and Halons are usually red with gray and/or white strips. Both have yellow tops and dual port or 2 valves to distinguish them from single port valve standard virgin cylinders. Table II contains the NSNs for cylinders containing recovered refrigerants and Halons. These NSNs should be used for turning in excess refrigerants and Halons to the Defense Reserve.

**TABLE I
EMPTY RECOVERY CYLINDER NSNs (FREE ISSUE) FOR ODSs
FROM THE DEFENSE RESERVE**

| <u>PRODUCT</u> | <u>CYLINDER CAPACITY SIZE (LBS)</u> | <u>EMPTY RECOVERY CYLINDER NSNs</u> |
|--------------------------------|---|---|
| <i>REFRIGERANTS</i> | | |
| R-11 | 59 | 8120-01-356-5960 |
| | 170 | 8120-01-356-9756 |
| | 1400 | 8120-01-355-9763 |
| R-12 | 45 | 8120-01-355-4017 |
| | 145 | 8120-01-355-4018 |
| | 1190 | 8120-01-355-4019 |
| R-114 | 57 | 8120-01-356-1245 |
| | 165 | 8120-01-356-1246 |
| | 1350 | 8120-01-356-1247 |
| R-500 | 43 | 8120-01-357-6774 |
| | 127 | 8120-01-357-7656 |
| | 1045 | 8120-01-357-7657 |
| R-502 | 44 | 8120-01-357-6770 |
| | 128 | 8120-01-357-6771 |
| | 1050 | 8120-01-357-6769 |
| <i>HALONS</i> | | |
| 1202 | 160 | 8120-01-356-1781 |
| 1211 | 200 | 8120-01-356-1248 |
| | 1500 | 8120-01-356-1249 |
| 1301 | 117 | *8120-01-371-0533 |
| | 150 | 8120-01-356-5963 |
| | 1240 | 8120-01-356-5962 |
| <i>SOLVENTS</i> | | |
| CFC-113 | Not Applicable | Not Applicable |
| 1,1,1 Trichloroethane (TCA) | Not Applicable | Not Applicable |

*** DENOTES A HIGH PRESSURE CYLINDER OF 600 PSI PLUS**

**TABLE II - NSNs FOR CYLINDERS
CONTAINING RECOVERED ODSs TO BE TURNED IN TO THE DEFENSE
RESERVE**

| <u>PRODUCT</u> | <u>CYLINDER CAPACITY SIZE (LBS)</u> | <u>RECOVERED CHEMICALS CYLINDER NSNs</u> |
|--------------------------------------|---|--|
| <i>REFRIGERANTS</i> | | |
| R-11 | 59 | 6830-01-355-9754 |
| | 170 | 6830-01-355-9756 |
| | 1400 | 6830-01-355-9758 |
| R-12 | 45 | 6830-01-355-4013 |
| | 145 | 6830-01-355-6648 |
| | 1190 | 6830-01-355-4015 |
| R-114 | 57 | 6830-01-356-1203 |
| | 165 | 6830-01-356-1205 |
| | 1350 | 6830-01-355-1207 |
| R-500 | 43 | 6830-01-357-7650 |
| | 127 | 6830-01-358-5123 |
| | 1045 | 6830-01-357-7654 |
| R-502 | 44 | 6830-01-357-6726 |
| | 128 | 6830-01-357-6727 |
| | 1050 | 6830-01-357-6905 |
| <i>HALONS AND FIRE-EXTINGUISHERS</i> | | |
| 1202 | 160 | 6830-01-356-1780 |
| 1211 | 1-5 | 6830-01-376-8013 |
| | 6-10 | 6830-01-376-8014 |
| | 11-20 | 6830-01-376-8015 |
| | 21-60 | 6830-01-376-8016 |
| | 61-125 | 6830-01-376-8017 |
| | 126-200 | 6830-01-356-1209 |
| | 201-340 | 6830-01-376-8018 |
| | 341-1500 | 6830-01-356-1211 |
| 1301 | 1-5 | 6830-01-376-8394 |
| | 6-10 | 6830-01-376-8395 |
| | 11-20 | 6830-01-376-8396 |
| | 21-70 | 6830-01-376-8397 |
| | 71-100 | 6830-01-376-8398 |
| | 101-117 | 6830-01-371-0501 |

**TABLE II - NSNs FOR CYLINDERS
CONTAINING RECOVERED ODSs TO BE TURNED IN TO THE DEFENSE
RESERVE (continued)**

| <u>PRODUCT</u> | <u>CYLINDER CAPACITY SIZE (LBS)</u> | <u>RECOVERED CHEMICALS CYLINDER NSNs</u> |
|--------------------------------------|---|--|
| <i>HALONS AND FIRE-EXTINGUISHERS</i> | | |
| 1301 | 118-125 | 6830-01-376-8399 |
| | 126-150 | 6830-01-356-9752 |
| | 151-200 | 6830-01-376-8400 |
| | 201-261 | 6830-01-376-8401 |
| | 261-350 | 6830-01-376-8402 |
| | 351-530 | 6830-01-376-8403 |
| | 531-600 | 6830-01-376-8404 |
| | 601-1240 | 6830-01-356-5958 |
| <i>SOLVENTS</i> | | |
| CFC-113 | 0.4 | 6850-01-424-8532 |
| | 1.4 | 6850-01-424-8533 |
| | 3 | 6850-01-424-8540 |
| | 11 | 6850-01-424-8531 |
| | 60 | 6850-01-424-8534 |
| | 100 | 6850-01-424-8535 |
| | 200 | 6850-01-424-8536 |
| | 690 | 6850-01-424-8537 |
| | 1,1,1 Trichloroethane | 0.4 |
| 1.5 | | 6810-01-424-9662 |
| 3 | | 6810-01-424-9665 |
| 12 | | 6810-01-424-8539 |
| 60 | | 6810-01-424-9674 |
| 640 | | 6810-01-424-9673 |

e. There will be no government recovery cylinders for solvents. Solvents should be returned in the originally purchased containers. The Defense Reserve will not accept any solvent container whose original seal has been broken. Table II contains a new NSN listing for turning in solvents to the Defense Reserve.

f. Monetary credit will not be given for turned in ODSs or cylinders. However, ownership credit will be given to the AF for their pounds of ODSs and will only be issued to AF customers. Government cylinders returned to the Defense Reserve will remain the property of the AF and issued free for recovering ODSs. Once reclaimed, the ODSs can be requisitioned from the Defense Reserve by AF authorized activities and the cylinders can be reissued as needed.

g. Through FY96, DLA will fund the transportation cost for excess ODS turn-ins to the Defense Reserve when the cost is above \$500.00. Transportation costs less than \$500.00 will be funded by the base shipping the ODS. Users must contact DSCR-RP, Policy and Procedures, Mr. Steve Minus, DSN 695-5203 or 804-279-5203 to make arrangements for funding before shipments are made. The information that DSCR-RP needs within a minimum of 5 working days before shipment is: 1) a cost estimate, 2) the NSNs and quantity of the items being shipped, 3) DODAAC, and 4) the base point of contact. When DLA funds the shipment to the Defense Reserve, a MIPR fund cite will be given to the customer.

h. Empty recovery and standard cylinders can be turned in to the Defense Reserve. If you are unsure whether the cylinder is Government-owned, return it anyway.

i. All Halons shall be removed from closure bases before being turned over to the Air Force Base Disposal Agency and will be added to the AF account of the Defense Reserve.

II. ODS Supply and Transportation Guidance

a. When shipping ODSs refer to the following regulations when needed:

- 1) MIL-STD 129L, Military Standard Marking for Shipment and Storage.
- 2) DLAR 4145.25, Storage and Handling of Compressed Gases and Liquids in Cylinders, and of Cylinders or AFR 67-12.
- 3) Code of Federal Regulations 49, 173.301, Requirements for the Shipment of Compressed Gas Cylinders.
- 4) DoD Regulation, 4000.25-1-M and/or AFM 67-1, Vol. I, Part One, Chapter 3 and/or AFMAN 23-110, Vol II, Part Two, Chapter 21, Section M and X.
- 5) DOD 4145.19-R-1, Chapter 15, Dangerous or Hazardous Materials-Turn-in.

b. All excess ODSs should be shipped to the following address:

DLA - Defense Depot Richmond Virginia
SW0400
Cylinder Operations
8000 Jefferson-Davis Highway
Richmond, VA 23297-5000

ODS REQUISITIONING INFORMATION

ODSs stocked within the Defense Reserve are critical resources and only activities designated by the Air Force will be able to requisition from the Defense Reserve. Refrigerants, Halons, and solvents are currently available through the Defense Reserve. Note, Air Force organizations should first consider attempting to procure ODSs from on-base, MAJCOM, or open market sources before requisitioning from the Defense Reserve.

ODS NSNs will be installed in the DSCR automated supply system alongside a record of approved requisitioners/users for the Air Force. Requisitions submitted to DSCR by non-approved requisitioners/users will not be processed and will generate Supply Status Code "D8" to the requisitioner, advising that the ordered materiel is a commodity requiring advance authorization.

I. Policy and Procedures

a. The organization should contact its base HMP or supply account for requisitioning support and possible redistribution of existing ODS stocks on-base or within the MAJCOM, or procurement through the open market.

b. If there are no on-base, MAJCOM, or open market ODS supplies available, the organization can attempt requisition from the Defense Reserve according to normal MILSTRIP procedures. Data requirements unique to ODS requisitions are detailed below in paragraph II, ODS Requisition Guidance.

c. When an organization needs to requisition an ODS from the Defense Reserve, the AF requires three conditions to be met:

1) The organization must be using the ODS for a MISSION CRITICAL application. This definition was stated in the Apr 94 ODS Data Call and the Air Force will continue to use this definition.

"A system whose operational effectiveness and operational suitability are essential to successful completion or to aggregate residual combat capability. If this system fails, the mission likely will not be completed. Such a system can be an auxiliary or supporting system, as well as a primary mission system."

2) The organization's required quantity must be covered under a Senior Acquisition Official (SAO) approval, formerly known as an Air Force waiver. A SAO approval is required before an ODS can be requisitioned. Current procedures provide HQ MAJCOM/LG's an allocation of ODSs to support their mission needs. MAJCOM ODS focal points are responsible for allocating ODSs to base activities. It is the base's responsibility to ensure an ODSs requirement is mission critical and a valid allocation exists. The MAJCOM/field units should stay abreast of current SAO approval policy and ensure approvals exist for their processes as needed. For further information on SAO approvals, base level organizations should contact their MAJCOM ODS focal point.

3) The organization's requisitioning activity (HMP or supply account) must have their Department of Defense Activity Address Code (DODAAC) on the AF Authorized Users List managed by HQ AFMC/ LG-EV. DODAACs can be obtained through base supply. The concept of an Authorized Users List allows the Air Force to control consumption or access to critical resources to the DODAAC level. Before an approval to requisition from the Defense Reserve is granted, the MAJCOM ODS focal point is responsible for forwarding the authorized

organizations'/users' DODAACs to HQ AFMC/ LG-EV, with the requested chemical(s)' NSNs and allocation quantity. An Authorized Users List of approvals is maintained by HQ AFMC/LG-EV. This listing is updated and forwarded to DSCR as necessary.

d. Current funding policy is that refrigerants and Halons requisitioned using approved Defense Reserve NSNs are "free issue". DLA will continue to sell their existing CFC-113 and 1,1,1 Trichloroethane stock until inventories are depleted. After DLA's current inventories are depleted solvents will become "free issue".

II. ODS Requisitioning Guidance

a. Table III on the following page provides a listing of the approved National Stock Numbers (NSNs) for refrigerants and Halons and the cylinders in which these ODSs reside. An updated Table III containing an NSN list for requisitioning solvents will be provided when current DLA inventories are depleted. Note, R-12 ten pound cylinders (NSN: 6830-00-264-9089), R-12 twenty-five pound cylinders (NSN:6830-00-292-0147) and R-114 eleven and a half pound cylinders (NSN:6830-00-290-4378) will no longer be serviced by the Defense Reserve.

b. The following special data entries to a DD Form 1348-1 are required for requisitions submitted to the Defense Reserve for an ODS:

1) Enter "S9G" for Routing Identifier Code in record positions 4-6. This directs requisitions to the Defense Reserve Manager at DSCR.

2) Enter "GDB" for Project Code in record positions 57-59.

3) Enter "SRG" in record positions 67-69. This directs issue transactions to the Defense Reserve held at the DSCR's storage depot.

4) Enter "6" for Air Force Ownership Code in record position 70.

5) Enter "A" for Condition Code in record position 71.

c. If further requisitioning information is required, contact the DSCR Requisition Assistance Hotline, DSN 695-4865 or HQ AFMC/LG-EV, DSN 787-3487.

**TABLE III
CYLINDERS NSNs FOR REQUISITIONING ODSs
FROM THE DEFENSE RESERVE**

| <u>PRODUCT</u> | <u>CYLINDER CAPACITY SIZE (LBS)</u> | <u>CYLINDERS NSNs</u> |
|--------------------------------|---|-----------------------|
| <i>REFRIGERANTS</i> | | |
| R-11 | 59 | 6830-01-355-9749 |
| | 171.5 | 6830-01-355-9750 |
| | 1400 | 6830-01-355-9735 |
| R-12 | 45 | 6830-00-264-5913 |
| | 145 | 6830-00-292-0133 |
| | 1190 | 6830-01-355-4011 |
| R-114 | 57 | 6830-00-290-4379 |
| | 165 | 6830-00-782-6232 |
| | 1360 | 6830-01-356-1201 |
| R-500 | 43 | 6830-01-357-7648 |
| | 127 | 6830-01-357-7646 |
| | 1045 | 6830-01-357-9135 |
| R-502 | 128 | 6830-00-138-2482 |
| | 1050 | 6830-01-357-6903 |
| <i>HALONS</i> | | |
| 1202 | 160 | 6830-00-985-7284 |
| | 1500 | 6830-01-370-8671 |
| 1211 | 200 | 6830-00-285-5887 |
| | 1500 | 6830-01-219-8529 |
| 1301 | 150 | 6830-00-543-6623 |
| | 1240 | 6830-01-356-9751 |
| <i>SOLVENTS</i> | | |
| CFC-113 | Not Available | Not Available |
| 1,1,1 Trichloroethane (TCA) | Not Available | Not Available |

AF MAJCOM DEFENSE RESERVE POCS

HQ AFRES/LGMAA (PAUL WHITE)
(ALTERNATE DAVID PATTERSON DSN: 497-1738)
155 2ND STREET
ROBINS AFB GA 31098-1635
DSN: 497-1645 COMM:(912)327-1645

HQ AFSOC/LGRSW (MSGT CATHERINE WENZLICK)
100 BARTLEY STREET
HURLBURT FIELD FL 32544-5273
DSN: 579-2340 COMM:(904)884-2340

HQ ACC/LGOV (CHARLES NAULT)
(ALTERNATE BRUCE STEVENS DSN: 574-9460)
11817 CANON BLVD, SUITE 306
NEWPORT NEWS, VA 23606
DSN: 574-9454 COMM:(804)764-9454

HQ AETC/LG-EM (MSGT EDWARD VOGEL)
555 E STREET, EAST
RANDOLPH AFB TX 78150-4440
DSN: 487-6850(210)652-6850

HQ USAF/LGMM (LTC JUDYANN MUNLEY, EARL MILES)
1030 AIR FORCE PENTAGON
WASHINGTON DC 20330-1030
DSN: 225-0844 COMM:(703)695-0844

HQ AFMC/LG-EV (MIKE BICKETT, ALEX BRISKI, DORICE GRIFFIN, THOMAS LORMAN)
4375 CHIDLAW ROAD, SUITE 6
WRIGHT-PATTERSON AFB OH 45433-5006
DSN: 787-3487 COMM:(513)257-3487

SAF/AQRE (LTC SHERMAN FORBES, KENNETH DORMER)
1060 AIR FORCE PENTAGON, ROOM 4C283
WASHINGTON DC 20330-1060
DSN: 225-4167 COMM:(703)695-4167

HQ USAFE/LGMM (MSGT DARRELL POFF)
UNIT 3050, BOX 105
APO AE 09094-5010
DSN: 480-6763

HQ AFSPC/LGM (MAJ MICHAEL KELLY)
150 VANDENBERG ST, SUITE 1105
PETERSON AFB CO 80914-4470
DSN: 692-3121 COMM:(719)554-3121

HQ ANGRG/LGMM (RICH RICO)
3500 FETCHET AVE
ANDREWS AFB MD 20762-5157
DSN: 858-8499 COMM:(301)981-8499

HQ PACAF/LGMFE (GORDON KAWELO)
25 E STREET, SUITE I-318
HICKAM AFB HI 96853-5412
DSN: 449-8862 COMM:(808)448-8862

HQ AMC/LGAB (CMSGT DAVID YOUNG)
402 SCOTT DRIVE, UNIT 2A2
SCOTT AFB IL 62225-5308
DSN: 576-6770 COMM:(618)256-6770

HQ USAFA/LGS (TERRY VEN ROY)
INDUSTRIAL DRIVE, SUITE 110
HQ USAFA/CEVV (GENE GALLOGLY)
8120 EDGERTON DRIVE, SUITE 40
USAF ACADEMY CO 80840-2400
DSN: 259-2289 COMM:(719)472-2289

AFCESA/DF (MILT PUCKETT)
139 BARNES DRIVE, SUITE 1
TYNDALL AFB FL 32403-5319
DSN 523-6152 COMM:(904)283-6152

DESKTOP GUIDE FOR THE ENVIRONMENTAL COMPLIANCE AND ANALYSIS SERVICES (ECAS) CONTRACT



Environmental Compliance and Analysis Services

Contract Management and Administration Procedures

Contents

1. Contract Overview

- A. Contract Description
- B. Delivery Order Process/flow chart

2. Contract Responsibilities

- A. ECAS Program Manager
- B. Technical Project Manager

3. Delivery Order Package

- A. Statement of Work Development
- B. Payment Monitoring Plan
- C. Government Estimate
- D. AF Form 9
- E. Contractor Ranking/Selection Sheet (to be completed/provided by ECAS program manager)

4. Contract Definitions

ECAS CONTRACT OVERVIEW

CONTRACT DESCRIPTION

ACC's Environmental Programs Division, Compliance Branch (HQ ACC/CEVC) through the ACC Contracting Squadron (ACC CONS) awarded five Architectural and Engineering (A&E) contracts to provide various environmental compliance and analysis services. The scope of the contracts are for study and design type services and not construction or environmental clean-up action. Services include the areas of (1) environmental analysis (NEPA), (2) natural/cultural resource plans, reports, surveys, (3) environmental compliance, (4) pollution prevention, (5) restoration (study/investigation phases only), (6) study and design services, (7) environmental training, outreach, seminars, (8) other environmental services.

The Environmental Compliance and Analysis Services (ECAS) contract is an Indefinite Delivery Order Indefinite Quantity (IDIQ), firm-fixed price contract. The capacity of the ECAS contract is \$100 million for each of the five awarded firms. The five firms chosen for the ECAS are: Radian; CH2M HILL; Parsons Engineering Science; EA Engineering, Science, & Technology; and Ecology and Environment, Inc.

The ECAS program is structured to allow for both centralized (HQ ACC managed) and decentralized (base level managed) award and execution of delivery orders. Centralized orders will be issued and administered through ACC CONS, and decentralized orders will be issued and administered through the requesting organization's base contracting activity.

DELIVERY ORDER PROCESS

The chronological order of events for generation and completion of each delivery order is as follows and is illustrated in the following attachment:

1. Technical project manager (TPM) obtains project validation/funding approval.
2. TPM submits statement of work (SOW) and government cost estimate to ECAS PM.
3. The ECAS PM reviews SOW, ranks the five ECAS firms and makes the selection (with input from the TPM). **2-3 days**
4. ECAS PM (centralized) or TPM (decentralized) develops delivery order (DO) package and submits to contracting activity (CA). **5 days**
5. CA reviews DO package and provides comments (if applicable) to ECAS PM or TPM. **2-5 days**
6. CA issues delivery order for preproposal conference (if necessary). **2 days**
7. Contracting Officer issues request for proposal (RFP) to contractor. **2 days (priority) - 14 days (routine)**
8. TPM, with ECAS PM, review proposal/submit technical review comments to CA. **2-5 days**
9. Optional: CA and TPM conduct a fact finding session with contractor when appropriate (i.e., when clarification or areas of concern need to be addressed prior to negotiation.)
10. CA prepares pre-negotiation objective. **1-2 days**
11. CA, with assistance from TPM, negotiate DO with contractor. **1 day**
12. Issue notice-to-proceed/DO. **1 day** (longer if additional funds are required)
13. TPM monitors contractor performance/recommends approval of work complete on invoices.
14. TPM reviews submittals and provides comments via the CA to the contractor.
15. CA provides DD Form 1421 (A-E evaluation form) to TPM upon project completion.
16. TPM completes and returns DD Form 1421 to CA. **5 Days**

NOTE: All times are based on average workload conditions and can be compressed for priority processing.

ECAS CONTRACT RESPONSIBILITIES

 **ECAS PROGRAM MANAGER (PM):** Focal point in civil engineering for the development, management, and execution of contracts.

Delivery Order (D.O.) Package Development:

The ECAS PM performs a cursory overview of requirements and provides assistance to the Technical Project Manager (TPM) with each delivery orders as follows:


- Scores and Ranks contractors (**with input from the TPM**).
 - + Contractor selection is the responsibility of the ECAS Program Manager. For each delivery order, all five firms are ranked/evaluated based on five criteria: (1) technical performance, (2) professional qualifications, (3) quality of work performed, (4) geographical location and (5) volume of previous work.
 - + The ECAS PM evaluates each contractor's SF 254/255 and DD Forms 1421 as applicable to each specific delivery order. The firm with the highest ranking is selected for the respective delivery order.
- Provides sample copies of statements of work (SOW) and/or assists TPM with preparing the SOW and government cost estimate (if requested).
- (Centralized only) Assembles D.O. package and forwards to ACC CONS/LGCE.

Execution:

- Tracks all delivery order invoices (centralized).
- Tracks percent completion for each delivery order.
- (Centralized only) Ensures that all formal correspondence to the contractor is routed from HQ ACC/CEV through ACC CONS.

Contract Completion:

- Ensures that the DD Form 1421 (contractor evaluation) is completed by the TPM and forwarded to ACC CONS/LGCE.

 **TECHNICAL PROJECT MANAGER:** Ensures the delivery order and product meet the intended requirement.

Centralized DO Management: The technical project manager (TPM) is responsible for the development and monitoring of the delivery order. Assistance is available from the ECAS PM.

Decentralized DO Management: The TPM obtains project validation/funding from HQ ACC; submits a draft statement of work to the ECAS Program Manager. After evaluation and contractor selection, the ECAS PM will assist the base in developing the delivery order package for submission to base's contracting activity. The TPM will provide technical oversight during project execution and provide the contractor with feedback on performance throughout the project. At project completion, the TPM will complete the DD Form 1421 (contractor evaluation), provided by the contracting activity.

Project Development:

- Identifies requirement, loads into A106 and obtains project validation from HQ ACC/CEVCP.
- Processes AF Form 9 (funding) upon receipt of funding advice from HQ ACC.
- Generates Delivery Order Package to include:
 1. Statement of Work (SOW). (Check with ACC to see if similar SOW is available)

2. Payment monitoring plan (attachment in SOW)
 3. Government cost estimate (labor rates can be provided by ECAS PM)
 4. Contractor ranking/selection sheet (provided by ECAS PM)
 5. AF Form 9
- (Decentralized) Forwards D.O. package to contracting activity.
 - (Centralized) Forwards D.O. package to ECAS PM.
 - Attends pre-proposal conference (if required).
 - Performs technical review of contractor's proposal; provides comments to contracting activity.
 - Assists contracting activity with negotiations.

Execution:

- Tracks contractor progress and validates monthly invoices for contractor payment.
- Reviews and prepares comments on contractor submittals (if required) and forwards them to the contractor (copy to contracting activity). Reviews and consolidates base comments (if applicable).
- Attends on-site field investigations with the contractor (as necessary).
- Attends meetings with contractor, base, and/or regulating agencies (as necessary).

Completion:

- Completes contractor evaluation (DD Form 1421) upon project completion (form will be provided by contracting activity).

DELIVERY ORDER PACKAGE

☒ Delivery Order Package Composition:

- **Statement of Work (SOW):** The SOW clearly defines the specific requirements of the project for a firm-fixed price contract. The contractor will need a detailed description in order to prepare a proposal.
- Consider the following as you prepare to build the SOW:
 - What are the objectives of the project? Keep the project focused on achieving the objectives.
 - What service do you want? Do you expect a high degree of contractor developed strategy and policy recommendations, or a straight forward data collection and manipulation? Frequent contractor and government interface for developing policy or new procedures? How much coordination is the contractor expected to perform among organizations? These considerations impact the numbers and types of personnel required.
 - How soon must the project start and when must it be completed? This impacts the number of personnel required for a given period.
 - Where will the project be performed? At which installation(s)?
 - How many do you want? Will the project involve plans or studies of more than one site? Performing an assessment of more than one process? Is there a learning process that leads to improved efficiency or reuse of information in subsequent tasks?
 - Do you want technical transfer or training so similar subsequent projects or tasks can be performed in-house?

ECAS SOW Format

HQ Air Combat Command developed the following SOW template to assist in developing SOWs:

ECAS SOW TEMPLATE

1. GENERAL
 - 1.0 Introduction
 - 1.1 Background
 - 1.2 Scope of Services
 - 1.3 Applicable regulations (optional) and definitions (optional)
 - 1.4 Government Furnished Equipment
2. PROJECT ADMINISTRATION AND MANAGEMENT
 - 2.1 Meetings, Conferences, Site Visits
 - 2.2 Public Meetings/Hearings
 - 2.3 Training/Education/Briefings
3. ENVIRONMENTAL COMPLIANCE AND ANALYSIS ACTIVITIES
 - 3.1 Specify Environmental Compliance and Media (e.g., air, water)
 - 3.2 Detail Specific Requirements
 - 3.3 Environmental Services
4. SUBMITTALS/DELIVERABLES
 - 4.1 Reports
 - 4.2 Progress Reports
 - 4.3 Meeting Minutes
 - 4.4 Site Visit Reports
 - 4.5 Databases/Computer Programs/Software

- **Payment Monitoring Plan** (see attached example): In order for the Technical Project Manager to track and approve monthly invoices for the delivery order, milestones and assigned percentages must be developed for each stage of work. The payment is typically included as an attachment to the SOW.

☒ PAYMENT MONITORING PLAN (EXAMPLE)

| <u>TASKS</u> | TASK PERCENTAGE | <u>ACTUAL % COMPLETE</u> |
|------------------------------------|------------------------|---------------------------------|
| Pre-Proposal Conference (optional) | 1 | _____ |
| Execution Plan / Field Visit | 4 | _____ |
| Initial Field Investigation | 15 | _____ |
| Follow-Up Field Investigation | 20 | _____ |
| Draft Report | 40 | _____ |
| Final Report | 20 | _____ |
| TOTAL | 100 | |

GOVERNMENT COST ESTIMATE

☒ GOVERNMENT COST ESTIMATE: As a preliminary step in the cost estimating process, it is helpful to prepare a man-hour estimate, broken down by task. The tasks should parallel the tasks as described in the statement of work. Since all five of the ECAS contracts were negotiated separately, labor categories and rates vary between contractors. The ECAS PM will provide the TPM with a cost estimate spreadsheet including the applicable labor rates when the TPM is ready to prepare the final cost estimate for inclusion in the delivery order package.

| | MANHOURS | | |
|-----------------------------------|-----------|-----------|-----------|
| <u>PROFESSIONAL CATEGORIES</u> | Task 1 | Task 2 | Task 3 |
| Program Manager | _____ | _____ | _____ |
| Project Manager | _____ | _____ | _____ |
| Environmental Legal Counsel | _____ | _____ | _____ |
| Civil Engineer | _____ | _____ | _____ |
| Structural Engineer | _____ | _____ | _____ |
| Mechanical Engineer | _____ | _____ | _____ |
| Electrical/Systems Engineer | _____ | _____ | _____ |
| Chemical Engineer | _____ | _____ | _____ |
| Geotechnical Engineer | _____ | _____ | _____ |
| Chemist | _____ | _____ | _____ |
| Environmental Engineer | _____ | _____ | _____ |
| Geologist | _____ | _____ | _____ |
| Hydrogeologist | _____ | _____ | _____ |
| Biologist/Ecologist | _____ | _____ | _____ |
| Industrial Hygienist/Toxicologist | _____ | _____ | _____ |
| Hazardous Waste Specialist | _____ | _____ | _____ |
| Engineering Technician | _____ | _____ | _____ |
| Draftsperson | _____ | _____ | _____ |
| CaDD Operator | _____ | _____ | _____ |
| Word Processor | _____ | _____ | _____ |
| Clerical | _____ | _____ | _____ |
| Subtotal Man-hours | _____ | _____ | _____ |
| <u>TRAVEL</u> | | | |
| Number of trips | _____ | _____ | _____ |

CONTRACT DEFINITIONS

DEFINITIONS:

- **Administrative Contracting Officer (ACO)** - Warranted contracting officer responsible for the administration of the ECAS contracts. The ACO may be different for centralized and decentralized delivery orders. Additionally, the ACO may be from a DCMAO and/or an EPA office.
- **AF Form 9 (purchase request)** - The funding document (under this contract) utilized for most delivery orders. Requires the technical project manager and HQ ACC/CEVC signature prior to forwarding to HQ ACC/CER.
- **Centralized Delivery Orders** - A delivery order negotiated, awarded, administered, and surveyed by the ACC CONS/LGCE and HQ ACC/CEVC.
- **Contracting Activity** - The contracting activity responsible for fulfilling the requesting organization's requirement through the negotiation, award, administration, and surveillance of a delivery order.
- **Decentralized Delivery Orders** - A delivery order negotiated, awarded, administered, and surveyed by organizations other than the ACC CONS/COE and HQ ACC/CEVC.
- **ECAS Program Manager** - HQ ACC/CEVC point of contact and contract manager for the ECAS contract. Responsible for the oversight of the ECAS and assistance to the technical project managers as required for delivery order development, execution, and close-out. Primary point of contact to the ACC CONS/COE.
- **Obligation Authority (OA)** - AF Form 616 is the funding document used to transfer money between Air Force agencies. In some cases, an AF Form 616 may be used for decentralized delivery orders.
- **Performance Evaluation Report (DD Form 1421)** - The A-E evaluation form which is completed at the end of each delivery order by the TPM. Any excellent or poor ratings must be substantiated by the evaluator with evidence of that type of performance.
- **Pre-Proposal Conference** - For complex requirements, a pre-proposal conference will be held. The conference is between the cognizant contracting activity, technical project manager and/or COTR (optional), program manager (optional), and the contractor. The conference will be held after cognizant contracting activity has sent a request for proposal to the contractor and prior to the contractor submitting their proposal. Purpose of the conference is to come to an understanding of the requirements in the statement of work in order for the contractor to prepare their proposal.
- **Requesting Organization** - The organization/base requesting through HQ ACC/CEVC to have work accomplished through the ECAS contracts.
- **Statement of Work (SOW)** - The narrative portion of the delivery order package which states the specific requirement for the delivery order. The SOW also includes a payment monitoring plan which breaks out specific work requirements with percentage complete for the delivery order in order to monitor monthly payments.
- **Technical Project Manager (TPM)** - Person who will develop and monitor specific delivery orders in their area of expertise.
- **Contracting Officer's Technical Representative (COTR)** - Individual responsible for inspection and acceptance of delivery services received. The COTR is also responsible for maintaining contractor surveillance. Can be the same individual as the TPM.

15 Nov 95

MEMORANDUM FOR ALL ACC ENVIRONMENTAL FLIGHT CHIEFS

FROM: ACC CES/ESC
129 Andrews St Ste 102
Langley AFB, VA 23665-2769

SUBJECT: Pollution Prevention (P2) Contract Execution

1. I've been hired to assist your office with the development and execution of pollution prevention contracts. I am available to assist your staff or anyone else at your installation with the development and/or execution of any contract in support of your P2 program.
2. To support you, my primary contracting tool is the Environmental Compliance and Analysis Services (ECAS). As you may know, the ECAS contracts are already awarded--all we need do is issue a delivery order for any particular project. Delivery orders can be issued and administered through your installation contracting office, or centrally issued and managed here at ACC, as you prefer. Attachment 1 is the "Desktop Guide for the ECAS Contract" for further background.
3. The firms available through ECAS offer a wealth of global experience and expertise and include: Parsons Engineering Science, Inc.; CH2M Hill; Radian Corporation; Ecology and Environment, Inc.; and EA Engineering, Science and Technology. Many P2 requirements can be worked including: plans, opportunity assessments, waste stream characterization/analysis, recycling market surveys, consultant services, process analysis, and any study or design-type service (not actual construction or restoration.)
4. I am ready to help with requirement validation, Statement of Work (SOW) preparation, development of man-hour (cost) estimates, etc. Bottom line--I can help you execute your P2 program using ECAS contracts. Please give me a call at DSN 574-4430 or E-Mail at granumm@hqacce.langley.af.mil and we'll discuss how I can assist with the execution of your P2 program.

MARTIN E. GRANUM, Capt, USAF
Pollution Prevention Contract Management

Attachment:

1. Desktop Guide for the ECAS Contract

MEMORANDUM FOR ALL ACC BASE CIVIL ENGINEERS

1 Nov 95

FROM: ACC/CEV
129 Andrews Street, Suite 102
Langley AFB VA 23665

SUBJECT: Pollution Prevention, Refrigerant, and Halon Management Plans

1. The Air Force Pollution Prevention Strategy, with CSAF/SAF memorandum dated 24 Jul 95 and ACC/CC memorandum dated 5 Sep 95, has set a goal for each Air Force installation to develop a Pollution Prevention (P2) Management Action Plan (MAP), a Refrigerant Management Plan (RMP), and a Halon Management Plan. Furthermore, the Air Staff requires that all plans should be completed NLT 31 Dec 95.
2. Most of the base P2 MAPs are complete. The RMPs were done as required by an ACC contract. Therefore, the only new requirement here is for a Halon Management Plan. Engineering Technical Letter (ETL) 95-1, *Halon 1301 Management Planning Guidance*, is a resource to help you develop a Halon Management Plan and includes a sample plan outline. We recommend the refrigerant and Halon management plans be incorporated into the base P2 MAP as a section, chapter or appendix, as appropriate.
3. The Air Staff requires us to report quarterly on the status of the subject plans. This status report should include an estimated completion date for each plan, until each plan is completed. Status reports are due to ACC CES/ESC by the 20th of each month following the end of a calendar year quarter. Please include in your initial status report in January of 1996 the individual responsible for the Halon Management Plan.
4. Our point of contact is Ms. Donna Tripp, DSN 574-4430 or 3553.

GILBERT N. BURNET
Acting Chief, Environmental Programs Division

cc: ACC CES/CC
ACC CES/ESC
ACC CES/ESO
ACC/CEXF

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR COMBAT COMMAND
LANGLEY AIR FORCE BASE, VIRGINIA

MEMORANDUM FOR ACC WINGS/CC

FROM: HQ ACC/CE
129 Andrews Street Ste 102
Langley AFB VA 23665-2769

SUBJECT: Reduction in Pesticide Use

11 Aug 95

1. Executive Order 12856 requires all federal agencies to establish pollution prevention programs that minimize the adverse effects of toxic materials which may impact our health and environment. To comply with this directive, the Secretary of Defense has established a goal to reduce the overall quantity of pesticides used on DoD installations by 50% (measured as pounds of active ingredient) by the end of FY 2000 using FY 1993 as the baseline (Atch 1).
2. To attain this goal, all ACC installations should review their pesticide use. Particular attention should focus on insecticides, herbicides, and fungicides used for grounds maintenance, golf courses, agricultural outleases, and entomology. To reduce current pesticide use, bases must begin by implementing sound integrated pest management (IPM) practices which incorporate cultural, mechanical and biological methods to provide long-term control thus reducing or eliminating the need to apply pesticides (Atch 2). Pest prevention should also be incorporated into all design and maintenance for structures, landscaping, and recreational areas. All unessential pesticide use should be discontinued.
3. Questions on pesticide reduction may be directed to Mr. Donald Teig or Mr. Jim Sabo, ACC/CEO, at DSN 574-2766 or (804) 764-2766.

JOHN J. ALLEN
Brigadier General, USAF
The Civil Engineer

Attachments

1. HQ USAF/CE Memo, 22 Feb 95
2. AFCESA/CC Memo, 15 May 95

HEADQUARTERS AIR FORCE CIVIL
ENGINEER SUPPORT AGENCY

Attachment 2

MEMORANDUM FOR ALMAJCOM/CE

FROM: AFCESA/CC
139 Barnes Drive Suite 1
Tyndall AFB FL 32403-5319

SUBJECT: Integrated Pest Management - Pollution Prevention Initiative

15 MAY 1995

1. In accordance with the HQ USAF/CE memo, 22 Feb 95, Reduction of Pesticide Application, this package is distributed to provide guidance on pesticide reduction. It conveys information on critical areas of the Air Force pest management program and contains guidance on establishing and enhancing Integrated Pest Management (IPM) programs at your installations. The IPM approach to pest management is fully consistent with the pollution prevention directives in Air Force Policy Directive 32-70 requiring elimination of pollution and minimizing the use of environmentally damaging materials. We feel IPM is the best strategy for pest managers to simultaneously achieve Air Force pest management goals, as well as pollution prevention goals applicable to pesticides as hazardous materials.

2. The attached guidance introduces the DoD pest management goals and measures of merit (MoM) as indicators of progress in meeting IPM and pollution prevention goals. Attachments 2 through 5 define the DoD MoMs and present current Air Force pest management program status relative to these goals. Attachments 6 through 9 present useful guidance for establishing or improving IPM programs at your installations.

3. The greatest challenge we face in our IPM efforts is to educate installation personnel--including everyone from senior leadership through the individual building managers, grounds keepers, and facility occupants--in IPM methods for controlling pests, focusing on minimal use of least-toxic pesticide chemicals. Success in educating our people will enhance the effectiveness of our IPM programs in controlling pests while reducing risks to human health and the environment. Your leadership is critical for meeting all the MoM elements and continuing to have effective and economical pest management programs. The base and MAJCOM Environmental Protection Committees are important tools for balancing the MoM elements with the goals of controlling disease vectors and of protecting the base population from exposure to toxic and persistent substances.

4. My POC for IPM is Mr. Wayne Fordham, HQ AFCESA/CESM, DSN 523-6465.

PETER K. KLOEBER, Colonel, USAF
Commander

Attachments: (listed on next page)

1. Distribution List (*not included*)
2. MoM Requirement
3. AF Status MoM 1 (*not included*)
4. AF Status MoM 2 (*not included*)
5. AF Status MoM 3 (*not included*)
6. IPM Definition and Explanation
7. Education Strategy
8. Contract Strategy
9. In-house Strategy

cc:

HQ USAF/CEV
HQ USAF/CEO
HQ AFCEE/CC
HQ AFMOA/SG
HQ AFIT/CE
HQ AFSVA/SV

DOD PEST MANAGEMENT MEASURES OF MERIT

Measure of Merit 1. Installation Pest Management Plans.

By the end of FY 97, 100 percent of all DoD installations will have pest management plans prepared, reviewed, and updated annually by pest management professionals.

Measure of Merit 2. Annual Amount of Pesticide Applied.

By the end of FY 2000, the amount of pesticide applied annually on DoD installations will be reduced by 50 percent from the FY 93 baseline in pounds of active ingredient.

Measure of Merit 3. Installation Pesticide Applicator Certification.

By the end of FY 98, 100 percent of all DoD installation pesticide applicators will be properly certified within two years of employment.

WHAT IS IPM?

Integrated pest management, or IPM, is an approach to pest control that utilizes regular monitoring to determine if and when treatments are needed and employs physical, mechanical, cultural, biological, and educational tactics to keep pest numbers low enough to prevent intolerable damage or annoyance. Least-toxic chemical controls are used as a last resort.

In IPM programs, treatments are not made according to a predetermined schedule; they are made only when and where monitoring has indicated that the pest will cause unacceptable economic, medical or aesthetic damage. Treatments are chosen and timed to be most effective and least disruptive to natural pest controls.

IPM program execution includes seven steps that are routine procedures for each pest problem. These steps are:

- Identify pest
- Develop plan/strategy
- Establish action thresholds
- Monitor pest population
- Control pest (optional)
- Document results
- Evaluate/redesign plan

CONTRASTS BETWEEN TRADITIONAL PEST CONTROL AND IPM

| <u>ELEMENT</u> | <u>TRADITIONAL PEST CONTROL</u> | <u>INTEGRATED PEST MANAGEMENT</u> |
|---|---------------------------------|---|
| PROGRAM STRATEGY | Reactive | Preventive pest control |
| CUSTOMER EDUCATION | Minimal | Extensive |
| POTENTIAL LIABILITY | High | Low |
| EMPHASIS | Routine pesticide application | Pesticides used when exclusion, sanitation, etc. are inadequate |
| INSPECTION AND MONITORING | Minimal | Extensive |
| PESTICIDE APPLICATION | By schedule | By need |
| INSECTICIDE IN OCCUPIED SPACES | Sprays & aerosols | Baits |
| APPLICATION OF SPRAYED INSECTICIDES | Surface treatment | Mostly crack and crevice |
| USE OF INSECTICIDE SPACE SPRAYING & FOGGING | Extensive | Minimal |
| RODENT CONTROL | Emphasis on rodenticide | Emphasis on trapping, sanitation, and exclusion |
| BIRD CONTROL | Emphasis on avicide | Emphasis on exclusion |
| WEED CONTROL | Emphasis on herbicide | Good fertilizer, mowing, aeration practices, and use of native plants |

Atch 6.2

IPM EDUCATION STRATEGY

The real problem in achieving IPM program implementation is changing the mind-set of our customers, and especially commanders. Each shop needs to develop an education program for their self-help and service order customers. An excellent program on this topic currently exists at Bolling AFB. Mr. Charles White at DSN 297-4209/4854 is available to discuss his program and can provide hardcopy handouts.

BCE and golf course technicians and their supervisors must accept that IPM can be an effective method to achieve pest control. Our installation pest management personnel are well aware of what IPM programs involve. Good technical information on IPM has and will continue to be sent from HQ AFCEA/CESM and the MAJCOM pest management professionals. Last year we made distribution of Common Sense Pest Control to all Air Force pest management supervisors. This textbook contains the latest and best information on IPM procedures. Also, this April we are sending all grounds management supervisors a copy of Energy-Efficient and Environmental Landscaping. This book provides information on better landscape practices.

IPM is also adaptable for management of grounds on military golf courses. The Golf Course Superintendents Association of America conducts annual training classes that focus on IPM and other management issues. Seminar information is available by calling 1-800-472-7878. Also, the Audubon Society conducts a comprehensive national program based on principles of sustainable resource management which includes IPM and other favorable environmental elements. Their point of contact is Mr. Ronald Dodson in Selkirk NY at (518) 767-9051. Mr. Larry Northrup, the golf superintendent at Dover AFB (DSN 445-6040) has a partnership program with the Audubon Society and thinks other Air Force installations can benefit from similar working relationships.

We recommend MAJCOM and base pest management personnel develop a comprehensive strategy to meet the MoM goals using IPM programs. This effort should then be followed by a briefing to educate commanders on the new pest management agenda.

IPM CONTRACT STRATEGY

When contracting for pest management services installations must first obtain MAJCOM review and approval before a request goes to the contracting office. This and other contracting information is available in section 3.7. of AFI 32-1053.

Air Force installations with current or future contract pest management operations need to tailor their Performance Work Statements (PWS) to fit IPM Strategies. A draft model PWS for IPM contracts is available from HQ AFCESA/CESM. Improvements to this document will be made during FY 95.

Pest management contract inspectors need training to ensure good program management. Quality assurance evaluator training will be given 7-12 May 95 at the Sheraton Inn in Cherry Hill NJ. Information on this course was provided to your pest management professional.

Atch 8

IPM IN-HOUSE STRATEGY

In-house IPM operations need to center on training, planning, and program execution.

We are working with the AFMPB's training committee, personnel that perform pest management instruction at Sheppard AFB TX, and contracting resources at HQ AFCESA to revamp existing and future training courses. The new courses will teach the IPM approach to educate pest control technicians. Plans call for involvement of MAJCOM and installation personnel during this improvement process.

Sound narrative IPM plans are essential to program development. Attachment 9.2 contains the latest AFPMB recommendation on plan content.

INSTALLATION IPM PLAN - SAMPLE OUTLINE

1. Installation Implementation Authority (Installation instruction, standard operating procedure, etc.)

2. Cover Sheet

a. Title

b. Installation name

c. Approvals

(1) Installation Commander

(2) Installation Environmental Coordinator

(3) Installation Medical Officer (Public Health Office and/or Bioenvironmental Engineer)

(4) Installation Pest Management Coordinator

(5) Installation Pest Management Consultant

3. Executive Summary

4. Introduction

a. Objective

b. Responsibilities

c. Installation Description and Mission

5. Strategies to be Included in Narrative for Each Pest Group

a. Identify Pest

b. Develop Plan/Strategy

c. Establish Action Threshold

d. Monitor Pest Population

e. Control Pest (optional)

f. Document Results

g. Evaluate & Redesign Plan

6. Pest Groups

a. Disease Vectors and Other Health-Related Pests

b. General Household and Nuisance Pests

c. Structural Pests

d. Weed Control

e. Stored Products Pests

f. Pests of Ornamental Plants and Turf

g. Pests of Natural Resources (golf course pest management plan attached)

h. Miscellaneous Pests

7. Administration

- a. Job Orders
- b. Contracts
- c. Inter-service Support Agreements
- d. Outleases
- e. Resources (Current and Proposed)
 - (1) Funding
 - (2) Staffing
 - (3) Materials-Pesticides and Equipment
 - (4) Facilities
- f. Reports and Records
- g. Training
- h. Coordination with Food Service Managers
- i. Termite Inspection Plan

8. Health and Safety

- a. Requirements
- b. Hazards
 - (1) Pest Control Personnel
 - (2) Public
- c. Shop
- d. Vehicles

9. Public Laws and Regulations

10. Coordination

11. Environmental Considerations

- a. Environmentally Sensitive Areas
- b. Endangered Threatened and Protected Species
- c. Noxious Weeds
- d. Pollution Control Projects
- e. Pollution Abatement Procedures

12. Pest Management Plan for Services Provided other Activities

- a. On Installation
- b. Off Installation

ANNEXES

Installation Map

Annual Pesticide Approval (to be approved by cognizant component pest management consultant prior to procurement)

Pesticide Inventory (NSN, manufacturer, unit of issue, concentration, etc.)

Pesticide Labels

Operational Control and Maintenance Records

Applicable Instructions and Procedures

Contracting Standards, Specifications, and Statements of Work

Manpower Surveys

Shop Equipment and Sources

List of Safety Items and Personal Protective Equipment

Technical Information

Spill Plan and Pesticide Clean-Up Guidance

Industrial Hygiene Surveys of Pest Control Shop

**DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR COMBAT COMMAND
LANGLEY AIR FORCE BASE, VIRGINIA**

**OFFICE OF THE COMMANDER
205 DODD BOULEVARD SUITE 207
LANGLEY AFB VA 23665-2788**

MEMORANDUM FOR ACC WINGS/CC

29 JUN 1995

SUBJECT: Environmentally and Economically Beneficial Landscaping Practices

1. The President has directed all federal agencies to develop sustainable landscaping practices to address environmental concerns. These include, but are not limited to, water conservation, energy conservation, erosion control, and the reduction in use of fertilizers and pesticides. Sustainable landscaping practices are also necessary for the Air Force to reach the federally mandated goals for pollution prevention in Executive Order 12856, which requires a 50% reduction in pesticide use by FY 2000 using FY 93 as the baseline.

2. To attain this goal, all ACC installations should review their landscaping practices, paying particular attention to environmental concerns. Installation landscaping practices should incorporate sound design planning, which compliments the local environment, while minimizing requirements for fertilizer and pesticides. Bases must start by selecting low maintenance, self-sustainable varieties of native trees, grasses and flowering plants adapted to their local climate. Landscape design should also incorporate proper use of mulches to effectively conserve water, reduce weeds, and control erosion. Recycling of green yard wastes, recycled water or high-efficiency irrigation systems, and proper placement of ornamental shade trees can also net significant long-term savings in grounds maintenance, water, and energy costs. Attachment 3, "Energy-Efficient and Environmental Landscaping", provides additional guidance for developing and managing sustainable landscaping practices.

3. Questions on environmentally and economically beneficial landscaping may be directed to Mr. Jim Sabo or Mr Donald Teig, ACC/CEOO, at DSN 574-2766 or (804) 764-2766.

THAD A WOLFE
Lieutenant General, USAF
Vice Commander

Attachments:

1. DUSD(ES)/PP Memo, 23 Sep 94.

2. The White House Memo, 26 Apr 94.
3. HQ AFCESA Publication, Energy-Efficient and Environmental Landscaping (*not included*)

Attachment 1

OFFICE of THE UNDER SECRETARY OF DEFENSE
3000 DEFENSE PENTAGON
WASHINGTON DC 20301-3000

DUSD (ES)/PP

23 SEP 1994

MEMORANDUM FOR ASSISTANT SECRETARY OF THE ARMY (INSTALLATIONS,
LOGISTICS & ENVIRONMENT)

ASSISTANT SECRETARY OF THE ARMY (MANPOWER & RESERVE AFFAIRS)
ASSISTANT SECRETARY OF THE NAVY (INSTALLATIONS & ENVIRONMENT)
ASSISTANT SECRETARY OF THE NAVY (RESEARCH, DEVELOPMENT &
ACQUISITION)

ASSISTANT SECRETARY OF THE AIR FORCE (MANPOWER, RESERVE AFFAIRS,
INSTALLATIONS & ENVIRONMENT)

DIRECTORS OF DEFENSE AGENCIES

SUBJECT: Environmentally and Economically Beneficial Practices on Federal Landscaped
Groups

The President directed a series of actions to increase environmentally and economically beneficial landscaping practices at Federal facilities in his April 26, 1994, memorandum on that subject. These practices should become standard policy in all our integrated natural resource management plans. I am enclosing a copy for your information.

The Department of Defense strongly supports all aspects of the President's memorandum. It is DoD policy to use regionally native plants and grasses to the maximum extent feasible on all lands under our control. This will reduce maintenance requirements, sharply reduce water consumption, reduce insect and plant disease problems, and result in installations that appear to fit more naturally into their environment. Retrofitting solely to achieve the use of regionally native plants and grasses is not authorized. Replacements and new or extended landscaped areas will comply with the policy and all other requirements of the President's memorandum. In carrying out the policy, local assets, such as Department of Agriculture Field Extension Offices, should be used in selecting appropriate plantings and conservation techniques.

The opportunity offered by implementing the President's directive will improve the environment, conserve precious natural resource and save the Department money--a true win-

win-win situation. I urge your wholehearted support and request that you make sure that the policy and attendant requirements are communicated to all operating levels. It is imperative all concerned elements of the local command, including the engineering and maintenance, the environmental and the morale, welfare and recreation staffs, be involved in implementing the directive. I also ask that each Military Service and the Defense Logistics Agency nominate one installation that best demonstrates the goals outlined in the President's memorandum and provide me information on that installation's program by December 1, 1994. A format for this submittal is attached.

Sheri W. Goodman
Deputy Under Secretary of Defense
(Environmental Security)

Attachments
(as stated)

cc: Under Secretary of Defense (Policy)
Director, Defense Research & Engineering
Assistant Secretaries of Defense
Comptroller
General Counsel
Inspector General
Director, Operational Test & Evaluation
Assistants to the Secretary of Defense
Director, Administration & Management

THE WHITE HOUSE

WASHINGTON

April 26, 1994

MEMORANDUM FOR THE HEADS OF EXECUTIVE DEPARTMENTS AND AGENCIES

SUBJECT: Environmentally and Economically Beneficial Practices on Federal Landscaped Grounds

The Report of the National Performance Review contains recommendations for a series of environmental actions, including one to increase environmentally and economically beneficial landscaping practices at Federal facilities and federally funded projects. Environmentally beneficial landscaping entails utilizing techniques that complement and enhance the local environment and seek to minimize the adverse effects that the landscaping will have on it. In particular, this means using regionally native plants and employing landscaping practices and technologies that conserve water and prevent pollution.

These landscaping practices should benefit the environment, as well as generate long-term cost savings for the Federal Government. For example, the use of native plants not only protects our natural heritage and provides wildlife habitat, but also can reduce fertilizer, pesticide, and irrigation demands and their associated costs because native plants are suited to the local environment and climate.

Because the Federal Government owns and landscapes large areas of land, our stewardship presents a unique opportunity to provide leadership in this area and to develop practical and cost-effective methods to preserve and protect that which has been entrusted to us. Therefore, for Federal grounds, Federal projects, and federally funded projects, I direct that agencies shall, where cost-effective and to the extent practicable:

- (a) use regionally native plants for landscaping;
- (b) design, use, or promote construction practices that minimize adverse effects on the natural habitat;
- (c) seek to prevent pollution by, among other things, reducing fertilizer and pesticide use, using integrated pest management techniques, recycling green waste, and minimizing runoff. Landscaping practices that reduce the use of toxic chemicals provide one approach for agencies to reach reduction goals established in Executive Order No. 12856,

"Federal Compliance with Right-To-Know Laws and Pollution Prevention Requirements;"

(d) implement water-efficient practices, such as the use of mulches, efficient irrigation systems, audits to determine exact landscaping water-use needs, and recycled or reclaimed water and the selecting and siting of plants in a manner that conserves water and controls soil erosion. Landscaping practices, such as planting regionally native shade trees around buildings to reduce air conditioning demands, can also provide innovative measures to meet the energy consumption reduction goal established in Executive Order No. 12902, "Energy Efficiency and Water Conservation at Federal Facilities;" and

(e) create outdoor demonstrations incorporating native plants, as well as pollution prevention and water conservation techniques, to promote awareness of the environmental and economic benefits of implementing this directive. Agencies are encouraged to develop other methods for sharing information on landscaping advances with interested nonfederal parties.

In order to assist agencies in implementing this directive, the Federal Environmental Executive shall:

(a) establish an interagency working group to develop recommendations for guidance, including compliance with the requirements of the National Environmental Policy Act, 42 U.S.C. 4321, 4331-4335, and 4341-4347, and training needs to implement this directive. The recommendations are to be developed by November 1994; and

(b) issue the guidance by April 1995. To the extent practicable, agencies shall incorporate this guidance into their landscaping programs and practices by February 1996.

In addition, the Federal Environmental Executive shall establish annual awards to recognize outstanding landscaping efforts of agencies and individual employees. Agencies are encouraged to recognize exceptional performance in the implementation of this directive through their awards programs.

Agencies shall advise the Federal Environmental Executive by April 1996 on their progress in implementing this directive.

To enhance landscaping options and awareness, the Department of Agriculture shall conduct research on the suitability, propagation, and use of native plants for landscaping. The Department shall make available to agencies and the public the results of this research.

SECRETARY OF THE AIR FORCE
WASHINGTON

MEMORANDUM FORALMAJCOM/CC
DISTRIBUTION C

SUBJECT: Air Force Pollution Prevention Strategy

JUL 24 1995

The Air Force is committed to environmental leadership and we have made tremendous strides in our environmental programs; however, we still have work to do. We recently outlined three environmental, safety and occupational health initiatives in our 13 March 1995 memorandum. They are to sustain readiness, be good neighbors, and leverage our limited resources. Pollution prevention is key to realizing these initiatives.

We have made great progress in the Pollution Prevention Program to include significant reductions in hazardous and solid waste disposal, and we are well on our way to instilling pollution prevention as a way of life. To this end we have revised the Air Force Pollution Prevention strategy to reflect recent changes in environmental laws, executive orders, and new Department of Defense policies and goals. This strategy replaces the Air Force Pollution Prevention Action Plan originally published in January 1993.

We must continue to be Leaders in environmental stewardship, and search for new ways to further reduce our dependence on hazardous materials, reduce our waste streams, and reuse or recycle the waste we do generate. We are relying on your support to implement this strategy. Together we can support our national defense mission while creating a cleaner, healthier environment for our people today and for future generations.

Ronald R. Fogleman
General, USAF
Chief of Staff

Sheila E. Widnall
Secretary of the Air Force

Attachment:
Pollution Prevention Strategy

**AIR FORCE
POLLUTION PREVENTION
STRATEGY**

VISION STATEMENT:

EFFECTIVELY PROMOTE POLLUTION PREVENTION¹ BY MINIMIZING OR ELIMINATING THE USE OF HAZARDOUS MATERIALS AND THE RELEASE OF POLLUTION INTO THE ENVIRONMENT. MEET OR EXCEED REGULATORY REQUIREMENTS THROUGH THE USE OF EDUCATION, TRAINING AND AWARENESS PROGRAMS, HEALTH-BASED RISK ASSESSMENTS, ACQUISITION PRACTICES, CONTRACT MANAGEMENT, FACILITIES MANAGEMENT, ENERGY CONSERVATION, AND INNOVATIVE POLLUTION PREVENTION TECHNOLOGIES.

OBJECTIVE 1. PERMEATE ALL MISSION AREAS WITH THE POLLUTION PREVENTION ETHIC THROUGH COMPREHENSIVE EDUCATION, TRAINING AND AWARENESS.

Sub-objective 1. Develop an environmentally aware and knowledgeable Air Force Team (including military and civilian personnel) through integrated education and training.

- a. Employ the Air Force Environmental Education and Training Master Plan to identify and program for education and training requirements (*OPR: AF/CE; OCR: SAF/MI, AF/DP*).
- b. Utilize the Interservice Environmental Education Review Board to ensure efficient/effective delivery of educational products with the joint Services (*OPR: AF/CE*).
- c. Promote pollution prevention awareness at each educational level: basic and technical training, commissioning programs, professional military and continuing education, and base introduction programs (*OPRs: AF/DP, AETC, USAFA; AFMC [SAM]; OCRs AF/CE, SAF/MI*).

¹"Pollution prevention" means "source reduction" as defined in the Pollution Prevention Act of 1990,(42 USC §§13101-13109), and other practices that reduce or eliminate the creation of pollutants. Pollution should be prevented or reduced at the source whenever feasible. Pollution that cannot be prevented should be recycled in an environmentally safe manner. Pollution that cannot be prevented or recycled should be treated in an environmentally safe manner, and disposal or other release into the environment should be employed only as a last resort and should be conducted in an environmentally safe manner.

Sub-objective 2. Incorporate the pollution prevention ethic into relationships with other agencies and the public.

- a. Strengthen working relationships with environmental regulators at all levels (*OPR: AF/CE; OCR: AF/SG, SAF/MI*).
- b. Champion partnerships with other Services, agencies, industry, and the public (*OPRs: AF/CE, SAF/PA; OCRs: SAF/AQ, AF/LG, SAF/MI*).

Sub-objective 3. Recognize outstanding individual, team, and installation pollution prevention contributions through the environmental awards, publicity, and recognition programs at all levels (*OPR: AF/CE; OCR: SAF/PA, SAF/MI*).

Sub-objective 4. Ensure installations use internal information sources such as base newspapers, commander's access channel and commander's calls to promote pollution prevention. Installation pollution prevention contributions should also be promoted to the media and community leaders (*OPR: SAF/PA; OCR: AF/CE*)

OBJECTIVE 2. INSTITUTIONALIZE POLLUTION PREVENTION INTO ALL PHASES OF THE WEAPON SYSTEM LIFE CYCLE.

Sub-objective 1. Integrate pollution prevention, system safety, health risk assessments, and environmental impact assessments into the entire life-cycle² of weapon systems programs³ from concept development to final disposal.

- a. Develop policies, procedures, training, and contract provisions (to include source selection criteria) to incorporate pollution prevention, system safety, health risk assessments, and environmental impact assessments as described in DODI 5000.2, Part 6, Section I, into the systems engineering activities of every Air Force Single Manager (*OPRs: SAF/AQ, AF/LG; OCRs: AF/CE, AF/SE, AF/SG, SAF/MI, AF/TE, AFMC, AFOTEC*).
- b. Focus existing AFMC infrastructure to support Single Managers' Pollution Prevention programs and to share lessons learned and maximize use of resources across Air Force Single Managers, other Services and with industry (*OPRs: SAF/AQ, AF/LG; OCRs: AFMC, SAF/MI*).
- c. Develop and incorporate procedures to ensure pollution prevention, system safety, health risk assessments, and environmental impact assessments are properly addressed during

²"Life Cycle" means concept, design, development testing, production, deployment, training, maintenance, supply management, distribution, and disposal/demilitarization.

³ "Weapon System Program" refers to every Air Force Program run by an Air Force Single Manager (System Program Director or SPD, Product Group Manager or PGM, and Material Group Manager or MGM).

program reviews to include Air Force System Acquisition Review Council and Weapon System Program Assessment Reviews (*OPRs: SAF/AQ, AF/LG; OCRs: AF/CE, AF/SE, AF/SG, SAF/MI, AFMC, AF/TE, AFOTEC*).

- d. Develop and incorporate procedures to integrate pollution prevention, system safety, health risk assessments, and environmental impact assessments into weapon system documentation, strategies, plans, and in the planning and awarding of contracts (*OPRs: SAF/AQ, AF/LG, SAF/MI*).
- e. Identify and/or develop tools (to include life cycle cost estimating) and milestones to support single managers with cost effective pollution prevention decisions (*OPRs: SAF/AQ, AF/LG; OCRs: SAF/MI, AF/SG, AFMC*)

GOAL: By 31 December 1995, work with OSD PA&E and other Services to develop common methodology for necessary life cycle cost considerations (*OPRs: SAF/AQ, AF/LG; OCRs: SAF/MI, AFMC*).

Sub-objective 2. Establish and execute an aggressive program to identify and reduce or eliminate ozone depleting substances (ODSs), toxic chemicals⁴, and extremely hazardous substances⁵ procurement generated through the use of technical documentation.

- a. Institute policies and procedures to minimize or eliminate the use of the above chemicals and substances. Prioritize efforts first on ODS, then the EPA-17 list of hazardous materials, and finally the remaining toxic and extremely hazardous materials. In ODS, prioritize efforts on solvents (1,1,1 Trichloroethane, then CFC-113), then refrigerants, and finally halons (*OPRs: SAF/AQ, AF/LG; OCRs:SAF/MI, ALMAJCOMs*).

GOAL: By 3 August 1995, review all standardized documents as listed in the DODISS and identify opportunities to eliminate and reduce the use of toxic chemicals, ODSs, and extremely hazardous substances. Complete all revisions by 31 December 1999 (*OPR: AFMC; OCRs: SAF/AQ, AF/LG, AF/SG, SAF/MI*).

- b. Develop and implement a comprehensive strategy to integrate the identification and tracking of all hazardous materials usage with the identification and elimination of requirements in Air Force Technical Orders, MILSPECs, and MILSTDs that drive that hazardous material usage. The hazardous material usage data generated by installation Hazardous Material Pharmacies will focus senior management attention on the processes and requiring documents responsible for the majority of the overall Air Force usage. The

⁴Toxic chemical is a list of substances defined by 40 CFR 372.2 and is updated periodically by the Environmental Protection Agency (EPA).

⁵Extremely Hazardous Substances is a list of substances defined by 40 CFR 355.20 and is updated periodically by EPA.

owners of those requiring documents must prioritize their efforts to try to eliminate the requirements in their documents. This strategy should also include a process for tracking and reporting the status of needed changes to standardized document call-outs of hazardous materials being used in the field. Identify a centralized Air Force funding source and, to the maximum extent possible, integrate this effort across all DoD components(*OPR: SAF/AQ; OCRs: AF/LG, AF/CE, AF/SG, SAF/MI*).

- c. Develop and incorporate procedures to evaluate the system safety risks, the occupational health risks, and the environmental impacts associated with process changes inherent to pollution prevention initiatives (*OPR: SAF/AQ; OCR: AF/SG, SAF/MI*)
- d. Issue clarifying guidance to address the content and timing of the Programmatic Environmental Analysis as a program's Environmental Master Plan as described in DODI 5000.2, Part 6, Section I. (*OPRs: SAF/AQ, AF/LG; OCRs: AF/CE, AF/SE, SAF/MI*)
- e. Establish procedures to insure that all significant safety, occupational health, and environmental costs are included in the life-cycle cost estimates of Air Force acquisition programs to include analysis of direct/indirect costs, including disposal costs, and other environmental & health costs and benefits. (*OPRs: SAF/AQ, AF/LG; OCRs: AF/CE, AF/JA, AF/SG, SAF/MI*)

GOAL: By 3 August 1995, submit any FAR revisions necessary to implement this strategy to the Civilian Agency Acquisition Council. (*OPR: SAF/AQ; OCR: SAF/MI*)

Sub-objective 3. Specify requirements for the purchase of environmentally preferable products and services and implement affirmative procurement programs in accordance with the Resource Conservation and Recovery Act, 42 U.S.C. §6962, and Executive Order 12873, Federal Acquisition, Recycling, and Waste Prevention.

- a. Implement acquisition policies and practices to integrate affirmative procurement considerations into all acquisition planning (*OPR: SAF/AQ; OCR: SAF/MI*).
 - Emphasize purchase of recycled materials to the maximum extent practical.
 - Encourage purchase activities to use environmental performance of vendors and products as selection criteria for awarding procurement contracts.

GOAL: By 31 August 1995, develop AFFARS supplemental guidance to implement aggressive affirmative procurement programs (*OPR: SAF/AQ; OCR: SAF/MI*).

GOAL: Develop guidance to meet or exceed the minimum materials content standards when purchasing or causing the purchase of printing and writing paper (*OPR: SAF/AQ; OCRs: AF/CE, AF/LG, SAF/MI, SAF/AA*).

(a) For high speed copier paper, offset paper, forms bond, computer printout paper, carbonless paper, file folders, and white woven envelopes, the minimum content standard shall be no less than 20 percent postconsumer materials beginning 31 December 1994. This minimum content standard shall be increased to 30 percent beginning on 31 December 1998.

(b) For other uncoated printing and writing paper, such as writing and office paper, book paper, cotton fiber paper, and cover stock, the minimum content standard shall be 50 percent recovered materials, including 20 percent postconsumer materials beginning on 31 December 1994. This standard shall be increased to 30 percent beginning on 31 December 1998.

(c) As an alternative to meeting the standards in goal (a) and (b), for all printing and writing papers, the minimum content standard shall be no less than 50 percent recovered materials that are a waste material byproduct of a finished product other than a paper or textile product which would otherwise be disposed of in a landfill, as determined by the State in which the facility is located.

OBJECTIVE 3. INCORPORATE POLLUTION PREVENTION IN ALL ASPECTS OF INSTALLATION OPERATIONS.

Sub-objective 1. Develop, maintain, and implement pollution prevention plans at each installation and facility. These plans should include baselines, pollution prevention assessments and investment strategies based on compliance with Federal regulations and health based risk assessments.

- a. Develop and implement plans to prevent releases and off-site transfers of toxic chemicals to all media (i.e. air, water, soil, surface and ground water) (*OPR: AF/CE; OCR: AF/SG, AF/LG, SAF/MI*).

GOAL: By 1 October 1995, develop installation and government owned-contractor operated (GOCO) Pollution Prevention Plans. (*OPR: AF/CE; OCR: SAF/MI*)

Sub-objective 2. Minimize or eliminate the use of hazardous materials⁶ and ozone depleting substances (ODS) in all activities.

- a. Implement the hazardous material pharmacy concept to license, track and control requisitions, receipts, issues, transfers, uses, and dispositions of all hazardous materials and ODS (*OPR: AF/LG; OCRs: AF/CE, AF/SG, SAF/MI*).

⁶ "Hazardous material" means any material which is a physical or health hazard and requires a Material Safety Data Sheet (MSDS) as defined in Federal Standard 313c.

GOAL: By 1 October 1995, implement hazardous material tracking system at all Air Force bases. (*OPRs: AF/CE, AF/LG; OCRs: AF/SG, SAF/MI*)

- b. Develop plans to eliminate purchases of ozone depleting substances (ODSs) and reduce purchases of EPA 17 Chemicals (*OPRs: SAF/AQ, AF/LG, AF/CE; OCRs: SAF/FM, AF/PE, SAF/MI*).

GOAL: By December 1995, develop a refrigerant management plan and a halon management plan at each installation (*OPR: AF/CE; OCR: SAF/MI*).

GOAL: By 31 December 1996:

- Reduce purchases of EPA 17 Industrial Toxics by 50 percent from 1992 baseline.
- Reduce hazardous waste disposal by 25 percent from 1992 baseline.

GOAL: By 31 December 1999:

- Reduce hazardous waste disposal by 50 percent from 1992 baseline.
- Reduce volatile air emissions by 50 percent from 1993 baseline.

Sub-objective 3. Implement cost-effective waste reduction⁷ at all installations and facilities to include government owned-contractor operated (GOCO) or leased facilities.

GOAL: By 1 October 1995, institute recycling and composting (where possible) at each installation. (*OPR: AF/CE; OCR: SAF/MI*)

GOAL: By 31 December 1996, reduce municipal solid waste disposal by 30 percent from 1992 baseline. (*OPR: AF/CE; OCR: SAF/MI*)

GOAL: By 31 December 1997, reduce municipal solid waste disposal by 50 percent from 1992 baseline. (*OPR: AF/CE; OCR: SAF/MI*)

Sub-objective 4. Minimize or eliminate releases and off-site transfers of toxic chemicals through the use of pollution prevention practices.

- a. Establish an Air Force-wide method and metric for documenting release reductions that properly credits activities undertaken prior to the 1994 baseline set in Executive Order 12856 (*OPR: AF/CE; OCRs: AF/LG, SAF/MI*).

GOAL: By 1999, achieve a 50 percent reduction of total releases and off-site transfers of toxic chemicals from the 1994 Toxic Reduction Inventory baseline. (*OPR: AF/CE; OCRs: AF/LG, SAF/MI*)

⁷ "Waste reduction" means preventing or decreasing the amount of waste being generated through source reduction, recycling, or purchasing recycled and environmentally preferable products.

Sub-objective 5. Develop policy and guidance to ensure that installations comply with Emergency Planning Community Right-to-Know Act (EPCRA) as implemented by Executive Order 12856 with consistent and defensible reports (*OPR: AF/CE; OCRs: AF/LG, AF/SG, SAF/MI*).

- a. Develop and maintain a comprehensive inventory of toxic chemicals, ODSs, extremely hazardous substances and hazardous chemicals,⁸ and the processes, systems, and management practices that use these chemicals (*OPR: AF/SG; OCRs: AF/CE, AF/LG, SAF/MI*).
- b. Foster cooperative approach between installations, their surrounding communities, and the Environmental Protection Agency in complying with the emergency planning and right-to-know requirements (*OPRs: AF/CE, SAF/PA; OCRs: AF/SG, SAF/MI*).
- c. Develop specific methods and procedures that installations can use to verify data prior to submission (*OPR: AF/CE; OCRs: AF/LG, AF/SG, SAF/MI*).

Sub-objective 6. Support the Department's energy resource management programs to assure all Defense Components comply with the Energy Policy Act of 1992 (P.L. 102-486) and Executive Order 12902 to achieve energy and water conservation, and increased use of renewable energy sources.

- a. Implement a comprehensive program to accomplish cost effective conservation in all existing installations and energy systems (*OPR: AF/CE; OCR: SAF/MI*).
- b. Develop and apply incentive programs such as gain sharing, shared energy performance contracting and utility demand side management programs (*OPR: AF/CE; OCR: SAF/MI*).
- c. Design and construct new facilities to minimize the life-cycle cost of the facility by utilizing energy and efficiency techniques and renewable energy technologies (*OPR: AF/CE; OCR: SAF/MI*).
- d. Operate, maintain and upgrade existing facilities to conserve water and energy when cost-effective to do so. Incorporate renewable energy technologies into existing facilities when cost-effective (*OPR: AF/CE; OCR: SAF/MI*).

GOAL: Revise and issue design guidance to incorporate conservation practices.

GOAL: By 2005, identify and accomplish all energy and water conservation actions which pay back in ten years or less.

⁸Hazardous chemical means any hazardous chemical as defined by 29 CFR 1910.1200(c).

GOAL: By 2000, achieve a reduction in facilities energy consumption, as measured in BTUs/SqFt, by 20 percent from the 1985 baseline. By 2005 reduce by 30 percent.

GOAL: By 2005, achieve an increase in industrial facilities energy use efficiency by 20 percent from the 1990 baseline.

Sub-objective 7. Maximize the use of environmentally friendly materials in the planning, programming, construction and maintenance of facilities and installations.

GOAL: By July 1995, issue guidance to promote the use of environmentally friendly materials in the construction and maintenance of facilities (*OPRs: AF/CE; OCRs: AF/LG, SAF/MI*).

Sub-objective 8. Establish and promote efficient material/energy-use practices through conservation, reutilization, materials substitution, recycling, affirmative procurement and the creation of markets for recycled materials.

GOAL: By July 1995, issue guidance to promote efficient material/energy-use practices in the construction and maintenance of facilities (*OPR: AF/CE, SAF/PA; OCRs: SAF/AQ, AF/LG, SAF/MI*).

Sub-objective 9. As appropriate, installations' pollution prevention planning and investment strategies must consider environmental justice concerns in accordance with Executive Order 12898 "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations."

- a. Identify and address any aspects that could result in disproportionately high and adverse human health or environmental effects on minority populations and low-income populations (*OPR: AF/CE; OCRs: AF/JA, AF/SG, SAF/MI*).
- b. Ensure that the planning and investment strategies do not have the effect of excluding persons from participation therein, denying persons the benefits thereof, or subjecting persons to discrimination thereunder because of their race, color, or national origin (*OPR: AF/CE; OCRs: AF/JA, SAF/MI*).
- c. Ensure public participation in and access to information related to the planning and investment strategies in accordance with Executive Order 12898, including working to ensure that any public documents, notices, and hearings are concise, understandable, and readily accessible to the public (*OPRs: AF/CE, SAF/PA; OCRs: AF/JA, SAF/MI*).

GOAL: By February 1996, develop guidance to incorporate environmental justice considerations in pollution prevention planning.

Sub-objective 10. Fully implement integrated pest management throughout the Air Force to reduce pesticide risk. (*OPR: AF/CE; OCRs: AF/SG, SAF/MI*).

GOAL: By 30 September 2000, reduce the amount of pesticide/herbicide applied annually, as measured in pounds of active ingredient, by 50 percent from the FY 1993 baseline.

Sub-objective 11. Develop and justify a comprehensive pollution prevention budget to obtain resources for high priority projects based on published funding guidance. (*OPR: AF/CE; OCRs: SAF/AQ, SAF/FM, AF/LG, AF/PE, AF/SG, SAF/MI*).

OBJECTIVE 4. DEVELOP AND TRANSITION INNOVATIVE POLLUTION PREVENTION TECHNOLOGIES TO THE FIELD.

Sub-objective 1. Identify and prioritize Air Force environmental technology needs.

- a. Focus pollution prevention R&D on developing and validating critical technologies needed for material and process modification (*OPR: AF/CE; OCRs: AFMC, SAF/AQ, SAF/MI*).

GOAL: By December of each year, publish the Prioritized Environmental Technology Needs list.

Sub-objective 2. Develop an "Air Force Environmental Quality Research, Development, and Acquisition (RD&A) Strategic Plan" which will formulate the resources necessary to address the Air Force's environmental technology needs.

GOAL: By March of each year, publish the strategic plan (*OPRs: AF/CE, AFMC; OCRs: SAF/AQ, SAF/MI*).

Sub-objective 3. Transition state of the art pollution prevention technologies developed under the Science and Technology or Manufacturing Technology Programs, or from outside the Air Force, to the field.

- a. Crossfeed ideas through a technology information center, and aggressively market them Air Force-wide (*OPR: AF/CE; OCRs: SAF/AQ, SAF/MI, AFMC*).

Sub-objective 4. Leverage and integrate the Air Force's pollution prevention R&D programs with those of other Federal agencies, academia, and private industry.

- a. Identify material and process substitutes in Defense technologies that have Government-wide and commercial application for expedited implementation (*OPR: SAF/AQ; OCR: SAF/MI*).

- b. Foster cooperative intergovernmental and government-industry partnerships/alliances to solve issues of environmental significance (*OPRs: AF/CE, SAF/AQ; OCR: SAF/MI*).
- c. Actively demonstrate and implement off-the-shelf technologies (*OPR: SAF/AQ; OCRs: AF/CE, AF/LG, SAF/MI*).

OFFICE OF THE UNDER SECRETARY OF DEFENSE
3000 DEFENSE PENTAGON
WASHINGTON DC 20301-3000

16 MAY 1995

MEMORANDUM FOR DEFENSE ENVIRONMENTAL SECURITY COUNCIL

SUBJECT: Environmental Security Program Measures of Merit

The purpose of this memorandum is to advise you of the measures of merit (MoM now in effect for the Defense Environmental Security Program. These MoM have been developed by the Defense Environmental Security Council (DESC) Committees and adopted by the Environment, Safety and Occupational Health Policy Board (ESOHPB). They have been developed in six functional areas, including: cleanup, compliance, pollution prevention, conservation, safety and occupational health, and pest management. Attachment I lists the functional area MoM and Attachments 2-7 provide briefing charts which convey information that resulted in the selection of the specific measures, e.g., program goals, drivers, and data sources.

Development and use of MoM to define environmental security goals, measure how well those goals are being achieved, and assess program effectiveness is consistent with implementation of Phase II of the National Performance Review, the Government Performance and Results Act, and the Report of the Defense Science Board Task Force on Environmental Security. Some of these performance measures will be a major factor in building the environmental security portion of the Department of Defense (DoD) FY 1997 budget. They will also be used by the Comptroller and PA&E in evaluating DoD's environmental performance against the Military Departments' budget submissions. They are all being incorporated in a revised set of environmental security DoD Instructions scheduled for publication in the next few months.

I would like to take this opportunity to express my appreciation for the cooperation your DESC Committee and ESOHPB representatives displayed to my staff in our corporate effort to develop and build a consensus for these performance measures. I look forward to your continued cooperation as we work together to improve the performance of the Department's environmental security program.

/s/ Sherri W. Goodman
Deputy Under Secretary of Defense
(Environmental Security)

Cleanup Measures of Merit

Defense Environmental Restoration Program

MoM 1: The number of sites that are classified as high, medium, and low relative risk, and as response complete (RC) or no further action (NFA).

MoM 2: The number of sites classified in each phase of cleanup (analysis, cleanup, or RC/NFA).

MoM 3: The number of sites for which milestones are accomplished (risk reduced, remedy in place, RC/NFA).

BRAC Environmental Program

MoM 1: (Relative Risk Reduction) The number of sites that are classified as high, medium and low relative risk, and as RC or NFA.

MoM 2: (Restoration) The number of acres that are transferable from DoD's control, according to the requirements of CERCLA.

MoM 3: (Compliance) The number of acres for which closure-related compliance projects have been completed.

MoM 4: (Planning) The number of acres that have completed the environmental analysis and decision documents for disposal and reuse of property that are required under NEPA.

Compliance Measures of Merit

MoM 1: Number of open, new, and closed enforcement actions.

MoM 2: Number of known underground storage tanks (USTS) versus number of USTs meeting 1998 RCRA Subtitle I Standards.

MoM 3: Number of NPDES permitted waste water treatment systems versus number of systems meeting NPDES permit standards.

Pollution Prevention Measures of Merit

MoM 1: The amount of toxic releases and off-site transfers of toxic chemicals DoD-wide as measured in pounds.

MoM 2: The amount of hazardous waste shipped off-site for disposal, treatment or recycling DoD-wide as measured in pounds.

MoM 3: The amount of nonhazardous solid waste disposed DoD-wide in landfills or incinerators as measured in pounds.

MoM 4: The amount of nonhazardous solid waste recovered and recycled DoD-wide as measured in pounds.

MoM 5a: Number of units at DoD installations that utilize Class I ozone depleting substances (ODS) reported by application area.

MoM 5b: Quantity of Class I ODS at installations as measured in pounds.

MoM 5c: Quantity of Class I ODS in weapon systems as measured in pounds.

MoM 6: Alternative fueled vehicles as percent of new non-tactical vehicles' acquisitions.

Conservation Measures of Merit

MoM 1a: The percentage of DoD installations with completed planning-level inventories of biological resources.

MoM 1b: The percentage of DoD installations with completed planning-level inventories of cultural resources.

MoM 1c: The percentage of DoD installations with completed inventories of wetlands.

MoM 2: The percentage of DoD installations with completed natural resource management plans.

MoM 3: The percentage of DoD installations with completed cultural resource management plans.

Safety and Occupational Health Measures of Merit

MoM 1: On- and off-duty military fatality rate.

MoM 2: Civilian lost time injury rate.

MoM 3: Aviation Class A accident rate.

MoM 4: Average time to abate violations cited by OSHA.

Pest Management Measures of Merit

MoM 1: The percent of DoD installations with pest management plans prepared, reviewed, and updated annually by pest management professionals.

MoM 2: The percent of DoD installation pesticide applicators properly certified within two years of employment.

MoM 3: The amount of pesticide applied annually on DoD installations in pounds of active ingredient.

Goals and Measures of Merit (MOM)
Defense Environmental Restoration Program
and
Base Realignment and Closure (BRAC) Environmental Program

Patricia A. Rivers
Assistant Deputy Under Secretary of Defense
(Environmental Cleanup)

**Environmental Restoration
MOM Development Process**

o Goals

Targets which the program seeks to meet

Derived from Defense Planning Guidance (DPG)

o Measurement Tools

Measures of Merit (MOM)

Measure progress toward established goals

Program Management Indicators (PMI)

Indicate status on more detailed aspects of the program

o Data Sources and Availability

Determine availability of data needed to support MOMs and PMIs and identify existing data gaps

Defense Environmental Restoration Program

o Goals

- Cleanup all high relative risk sites to lower relative risk or have remedial systems in place by the end of FY02, or within 3 years for newly identified high relative risk sites

- Cleanup all medium relative risk sites to lower relative risk or have remedial systems in place by the end of FY08

- Cleanup all low relative risk sites by the end of FYI 5

- o Measure

- The number of sites that are classified as high, medium, and low relative risk, and as response complete (RC) or no further action (NFA)
- The number of sites classified in each phase of cleanup (analysis, cleanup, or RC/NFA)
- The number of sites for which milestones are accomplished (risk reduced, remedy in place, RC/NFA)

- o Drivers

- CERCLA, RCRA, State Laws
- Executive Order 12580, Superfund Implementation
- DPG

- o Data Sources

- Planning, Programming, and Budgeting System (PPBS)
- Restoration Management Information System (RMIS)
- After 1997, expect to collect through DESCIM

BRAC Environmental Program - Relative Risk Reduction

- o Goals

- Cleanup all high relative risk sites to lower relative risk or have remedial systems in place by the end of FYO1, or within 3 years for any newly identified high relative risk sites
- Cleanup all sites to no further action or have remedial systems in place within three years after a reuse plan has been finalized, or within three years after operational closure, whichever is earlier

- o Measure

- The number of sites that are classified as high, medium, and low relative risk, and as RC or NFA

- o Drivers

- CERCLA, RCRA, State Laws
- Executive Order 12580, Superfund Implementation
- DPG

- o Data Sources

- PPBS
- RMIS
- After 1997, expect to collect through DESCIM

BRAC Environmental Program - Restoration

- o Goal

- Make property environmentally suitable for transfer under CERCLA by 2001

- o Measure

- The number of acres that are transferable from DoD's control, according to the requirements of CERCLA

- o Drivers

- CERCLA
- Base Closure and Realignment Acts (1988 and 1991)
- DPG

- o Data Sources

- BRAC data call
- After 1997, expect to collect through DESCIM

BRAC Environmental Program - Compliance

o Goal

- Complete compliance work in a sequence that supports approved reuse plans within 3 years after the reuse plan has been finalized, or within 3 years after operational closure, whichever is earlier

o Measure

- The number of acres for which closure-related compliance projects have been completed

o Drivers

- RCRA, CWA, CAA, TSCA, State Laws
- Base Closure and Realignment Acts (1988 and 1991)
- Regulations governing asbestos-containing materials (ACM), lead-based paint (LBP), polychlorinated biphenyls (PCB), radon, and underground storage tanks (UST)
- DPG

o Data Sources

- BRAC data call
- After 1997, expect to collect through DESCIM

BRAC Environmental Program - Planning

o Goal

- Complete the analysis required under the National Environmental Policy Act (NEPA) within three years after approval of the base closure or realignment or within one year after an approved reuse plan is completed, whichever is earlier

- o Measure

- The number of installations that have completed the environmental analysis and decision documents for disposal and reuse of property that are required under NEPA

- o Drivers

- NEPA
- Base Closure and Realignment Acts (1988 and 1991)
- DPG

- o Data Sources

- PPBS
- BRAC data call
- After 1997, expect to collect through DESCIM

COMPLIANCE MEASURES OF MERIT
May 10, 1995

Compliance - Current Enforcement Actions

- o Measure - Number of Open, New, and Closed Enforcement Actions
- o Goal - Reduce Open Enforcement Actions 15% By the End of FY95, From a FY92 Baseline
- o Driver - To Reduce Liability
- o Future Addition - "Pending" - Closed by installation, but waiting regulator agreement

**Compliance - New
Underground Storage Tanks (USTs)**

- o Measure - Number of Known USTs Vs. Number of USTs Meeting 1998 RCRA Subtitle I Standards
- o Goal - All USTs Meet the Standards by the 1998 Deadline
- o Driver - RCRA Subtitle I
- o Notional data, except FY94/2

**Compliance - New
Waste Water Treatment Systems**

- o Measure - Number of NPDES Permitted Waste Water Treatment Systems Vs. Number of Systems Meeting NPDES Permit Standards
- o Not meeting STDs is defined as needing MILCON project to correct deficiencies
- o Goal - Meet all Permit Standards
- o Driver - Clean Water Act
- o National Data Only

**DOD POLLUTION PREVENTION PROGRAM
MEASURES OF MERIT**

Toxic Releases

- o Measure
 - The amount of toxic releases and off-site transfers of toxic chemicals DoD-wide as measured in pounds
- o Goals
 - Reduce 50% by 1999 from the 1994 TRI baseline
- o Drivers
 - Executive Order 12856 -- data element required
 - 1994 SECDEF Pollution Prevention Strategy

- o Tools for Measurement

- Currently collect by hand or by various automated systems
- By 1997, expect to collect using DESCIM Hazardous Substances Management System

Hazardous Waste Disposal

- o Measure

- The amount of hazardous waste shipped off-site for disposal, treatment or recycling DoD-wide as measure in pounds

- o Goals

- Reduce 50% by 1999 from a 1992 baseline

- o Drivers

- Standing DoD Measure since 1987

- o Tools for Measurement

- Currently collected by hand and through various automated systems
- Plan to collect using DESCIM HSMS system by late 1997

Nonhazardous Solid Waste Disposal

- o Measure

- The amount of nonhazardous solid waste disposed DoD-wide in landfills or incinerators as measure in pounds

- o Goals

- Reduce 50% by 1999 from a 1992 baseline

- o Drivers

- Executive Order 12873 -- Requires DoD to establish goal

- o Tools for Measurement

- Currently collected by hand and through various automated systems
- Plan to collect using DESCIM Solid Waste Annual Reporting System by 1997

Nonhazardous Solid Waste Recycling

- o Measure

- The amount of nonhazardous solid waste recovered and recycled DoD-wide as measure in pounds.

- o Goals

- Recycle 50% by 1999 from a 1992 baseline

- o Drivers

- Executive Order 12873 -- Requires DoD to establish goal

- o Tools for Measurement

- Currently collected by hand and through various automated systems
- Plan to collect using DESCIM Solid Waste Annual Reporting System by 1997

Ozone Depleting Chemicals

- o Measure

- Number of units at DoD Installations that utilize Class I ODS reported by application area
- Quantity of Class I ODS at Installations as measured in pounds

- Quantity of Class I ODS in weapon systems as measured in pounds

o Goals

- For installations, Reduce 20% by 2000 from a 1995 baseline
- For weapon systems, Reduce 15% by 2000 from a 1995 baseline

o Drivers

- FY 1993 National Defense Authorization Act (Section 326)

>> New Defense Contracts Shall not Include Specs or Standards Requiring ODS unless Certified by General or Flag Officer that No Suitable Substitutes are Available

o Tools For Measurement

- Now collected by hand

Alternative Fueled Vehicles

o Measure

- Alternative Fueled Vehicles as Percent of New Non-Tactical Vehicles Acquisitions.

o Goals:

- 1996 - 25% of Acquisitions to be AFVs
- 1997 33%
- 1998 50%
- 1999 and After -- 75%

o Drivers

- Energy Policy Act of 1992
- Clean Air Act Amendments of 1990 (and SiPs)
- Executive Order 12844 -- "Federal Use of Alternative Fueled Vehicles"

o Tools for Measurement

- Currently collect by hand
 - >> AF collects at Warner-Robins Air Logistics Center, GA
 - >> Navy collects at Port Heuneme, CA -- Naval Facilities Engineering Service Center
 - >> Army leases all administrative vehicles from GSA and relies on GSA data
- Plan to use part of FY95 earmark to modify Service fleet management systems to collect AFV data. Also plan to develop a PC program to consolidate Service data at the OSD level

DOD CONSERVATION PROGRAM MEASURES OF MERIT

General Objectives of Conservation Measures of Merit

- o To track progress in:
 - Identifying resources
 - Planning to manage the resources
 - Implementing management plans

- o Identify potential funding shortfalls

Biological Resources, Cultural Resources, and Wetlands Inventories

- o Tools for Measurement
 - Currently collected by separate data call
 - By FY 1996, expect data requirements to be integrated into DESCIM and Conservation Instruction
- o Value of Data
 - Accurate inventories are essential first step to sound resource planning and management
 - Educate others on the importance of inventories
 - Track compliance with requirements
 - Essential for measuring progress and projecting funding requirements

Biological Resources Inventories

- o Measure

- The percentage of DoD installations with completed planning-level inventories of biological resources

- o Goal

- Complete planning-level inventories for all installations by FY 1998

- o Driver

- Endangered Species Act
 - Marine Mammal Protection Act
 - Migratory Bird Treaty Act
 - National Environmental Policy Act

Cultural Resources Inventories

- o Measure

- The percentage of DoD installations with completed planning-level inventories of cultural resources

- o Goal

- Complete planning-level inventories for all installations by FY 1998

- o Drivers

- National Historic Preservation Act
 - Archeological Resources Protection Act
 - Native American Graves Protection and Repatriation Act/
National Environmental Policy Act

Wetlands Inventories

- o Measure

- The percentage of DoD installations with completed inventories of wetlands

- o Goal

- Complete wetland inventories for all installations by FY 1998

- o Drivers

- Clean Water Act
- Executive Order 11990
- Presidential Memo on "No Net Loss" of Wetlands

Natural and Cultural Resources Management Plans

- o Tools for Measurement

- Currently collected by separate data call
- By FY 1996, expect data requirements to be integrated into DESCIM and Conservation Instruction

- o Value of Data

- Plans identify and prioritize actions required to protect, restore and enhance natural and cultural resources
- Plans identify potential volunteer and partnership opportunities
- Plans promote coordination with other offices
- Essential for measuring progress and projecting funding requirements

Integrated Natural Resource Management Plans

- o Measure

- The percentage of DoD installations with completed natural resource management plans

- o Goal

- Complete plans for all appropriate installations by FY 2000

- o Driver

- Sikes Act

Cultural Resource Management Plans

- o Measure

- The percentage of DoD installations with completed cultural resource management plans

- o Goal

- Complete plans for all appropriate installations by FY 2001

- o Drivers

- National Historic Preservation Act
- Archeological Resources Protection Act
- Native American Graves Protection and Repatriation Act

DEPARTMENT OF DEFENSE PEST MANAGEMENT PROGRAM Measures of Merit

DoD PEST MANAGEMENT MISSION

To prevent pests and disease vectors from adversely affecting military operations or missions-by establishing and maintaining safe, efficient and environmentally sound integrated pest management programs.

INSTALLATION PEST MANAGEMENT PLANS Measures of Merit

- o By End of FY97, Complete All Installation Pest Management Plans
- o By End of FY98, Certify All Installation Pesticide Applicators
- o By End of FY00, Reduce Pesticide use 50% from FY93 Baseline

Installation Pest Management Plans

- o Measure
 - The percent of DoD installations with pest management plans prepared, reviewed, and updated annually by pest management professionals
- o Goal
 - By the end of FY97, complete and annually update 100% of pest management plans
- o Driver
 - Standing DoD policy since 1983
- o Tools for Measurement
 - Data currently collected manually or by several automated systems
 - In 1996, the objective is to collect data using the DESCIM Pest Management Migratory System

Installation Pesticide Applicators

- o Measure
 - The percent of DoD installation pesticide applicators properly certified within two years of employment
- o Goal
 - By the end of FY98, properly certify 100% of all installation pesticide applicators

- o Driver

- Federal Insecticide, Fungicide, and Rodenticide Act
- State regulations
- Standing DoD policy since 1983, revised in 1994

- o Tools for Measurement

- Data currently collected manually or by several automated systems
- In 1996, the objective is to collect data using the DESCIM Pest Management Migratory System

Pesticide Use Reduction

- o Measure

- The amount of pesticide applied annually on DoD installations in pounds of active ingredient

- o Goal

- By the end of FY2000, reduce the amount applied by 50% from the FY93 baseline

- o Drivers

- 1994 SECDEF Pollution Prevention Strategy
- DoD initiative with EPA, USDA, and FDA

- o Tools for Measurement

- Data currently collected manually or by several automated systems
- In 1996, the objective is to collect data using the DESCIM Pest Management Migratory System

NOTE: Graphs and Charts used in the presentation are not available here.

MEMORANDUM FOR SEE DISTRIBUTION 10 Apr 95

FROM: HQ USAF/CEV
1260 Air Force Pentagon
Washington, DC 20330-1260

SUBJECT: Air Force Guidance for Toxic Release Inventory (TRI) Reporting

Executive Order 12856, "Federal Compliance With Right-to Know Laws and Pollution Prevention Requirements," requires all Federal agencies to comply with the Emergency Planning and Community Right-to-Know Act (EPCRA). All Air Force installations meeting threshold requirements set forth in EPCRA Section 313 are required to submit TRI reports by 1 July 1995.

Although Civil Engineering Environmental Management is responsible for the TRI reports, the interdisciplinary nature of EPCRA Section 313 requires support from all organizations involved in the management of hazardous materials. The "Air Force Guidance for Toxic Release Inventory Reporting" (atch 1) provides the framework for the Air Force's goal of consistent, defensible, and on-time reports. Attachment 2 contains some common questions and answers to assist in completing the TRI reports.

This guidance is a coordinated effort between HQ USAF/CEV and AFMOA/SGP.

L. DEAN FOX, Colonel, USAF
Director of Environment
Office of The Civil Engineer

Attachments:

1. Air Force TRI Guidance
2. Questions & Answers

cc:

SAF/MIQ/PAM
HQ USAF/LGMM/LGSP
AFMOA/SGP
HQ AFCEE/EP
AFLSA/JACE

Air Force Guidance

For Toxic Release Inventory Reporting as specified by Executive Order 12856
“Federal Compliance With Right-to-Know Laws and Pollution Prevention Requirements”

References:

- (a) HQ USAF/CVA Memo, 14 Feb 94, Executive Order 12856, “Federal Compliance With Right-to-Know Laws and Pollution Prevention Requirements”
- (b) HQ USAF/CEV Memo, 28 Feb 94, DoD Implementing Guidance for Executive Order 12856, “Federal Compliance With Right-to-Know Laws and Pollution Prevention Requirements”
- (c) AFI 32-7080, 12 May 94, “Pollution Prevention Program”
- (d) AFI 48-119, 25 Jul 94, “Medical Service Environmental Quality Programs”
- (e) DUSD(ES) Memo, 28 Nov 94, to the Assistant Administrator, Office of Enforcement and Compliance Assistance, EPA For purposes of this guidance, reference (b) will from here on be referred to as the “February 1994 DoD Guidance”.

General Guidance

1. Purpose: The intent of this guidance is to 1) provide clarification of the February 1994 DoD Guidance and 2) define Air Force policy on complying with Section 313 of EPCRA as specified by Executive Order 12856 (herein referred to as EO 12856) on Air Force installations.

Successful implementation of EO 12856 requires Air Force-wide consistency in interpretation and application of the Environmental Protection Agency’s (EPA) regulations pursuant to EPCRA (40 CFR Part 372 - Toxic Chemical Release Reporting:

Community Right-to-Know). Similarities among the missions and operations of individual Air Force bases mandate consistent compliance and reporting procedures. This document presents Air Force policy and guidance that provides the foundation for consistent, on-time, and defensible implementation and execution of EO 12856 as it applies to EPCRA Section 313 at Air Force installations.

2. Roles and Responsibilities:
 - a. HQ USAF:
 - (1) HQ USAF/CEV develops and oversees implementation of Air Force policy for EPCRA Section 313 and the Pollution Prevention Act (PPA). The Pollution Prevention Division (HQ USAF/CEVV) is the office of primary responsibility (OPR) for Toxic

Release Inventory (TRI) reporting and related requirements. The Environmental Compliance Division (HQ USAF/CEVC) is the OPR for EPCRA Section 313 compliance issues ensuring that TRI data correlate with analogous data provided by the Air Force to the EPA under other environmental programs, i.e., Clean Water Act, Clean Air Act, and the Resource Conservation and Recovery Act.

- b. AFMOA/SGPA Responsibilities: HQ AFMOA/SGPA develops the Medical Service Environmental Quality and Occupational Health Programs for AF/SG, provides implementing and supplemental guidance, and performs program implementation and execution oversight.
 - c. Major Command Responsibilities: Provide guidance and oversee compliance with EO 12856 at their installations. Forward to HQ USAF/CEVV a copy of each installations EPA Form R (as specified by paragraph 8, Reporting Procedures, of this guidance) submitted to EPA by your installations.
 - d. Installation Responsibilities: Take action to comply with EO 12856.
- (1) Civil Engineering Environmental (Environmental Management (EM)): Base level CEV (EM) is responsible for completing and submitting to the appropriate regulatory agencies, an EPA Form R for each listed toxic chemical exceeding EPCRA Section 313 thresholds. The general guidelines listed below should be referenced when preparing EPA Form R's:
- (a) Maintain thorough documentation: Document all data, assumptions, estimations, process diagrams, and calculations used to prepare EPCRA Section 313 reports. Documentation of data showing that reporting thresholds were not met is as important as documentation used to develop release reports on those chemicals meeting thresholds. All documentation must be kept for at least three years from the date of the report. Ensure EPCRA Section 313 records are accessible, complete, clear, and auditable by regulators.
 - (b) Use available data: EPCRA does not mandate installation of monitoring devices to obtain exact release data. Engineering estimates based on information available is a valid method to compute releases. If exact data is available, use it; if not, make reasonable and auditable assumptions.
 - (c) Ensure consistency with other installation reports: EPCRA release reporting must be coordinated with other data reported in compliance with other regulatory requirements, such as the Clean Air Act, the Clean Water Act, and the Resource Conservation and Recovery Act. Don't allow inconsistencies to be reported. If errors are found, make adjustments to those reports found to be in error and report the correct releases to applicable regulatory agencies. Consistency is essential with existing permits.

- (d) Submit reports on-time: Prepare the reports to the best of your ability and submit them to the appropriate organization. Forward to your MAJCOM a copy of each EPA Form R (as specified by paragraph 8, Reporting Procedures, of this guidance) compiled and submitted to EPA. New information discovered after a report is submitted can be provided in an updated report. Updated reports can be submitted at any time without violating EO 12856 requirements.
 - (e) Document progress towards reduction goals: Every installation should track toxic chemical reduction efforts based on releases reported on the CY94 baseline reports. Installation efforts to contribute to DoD's 50% reduction goal in toxic chemical releases and off-site transfers should be documented by 31 December 1995 in the installation Pollution Prevention Management Plan.
- (2) Hazardous Material Pharmacy (HMP): The HMP is an excellent source for the data required to complete the EPA Form R reports. At installations with an operational HMP, CEV (EM), bioenvironmental engineering, and HMP personnel should work together to determine the best source of available inventory and release data.
 - (3) Bioenvironmental Engineering: Maintains an inventory of hazardous materials usage data which is based primarily upon supply issue data and workplace surveys. Inventories, to include chemical constituents, are maintained for each industrial workplace.
 - (a) In the absence of available data from the HMP, SGPB will provide CEV (EM) access to either of the following items: (1) Copies of data and applicable inventory reports contained in the Hazardous Material/Pollution Prevention (HM/P2) module of the Aeromedical Services Information Management System, or (2) At a minimum, copies of AF Form 2761, Hazardous Materials Management.
 - (b) SGPB may offer assistance to CEV (EM) to ensure proper identification of threshold quantities and applicable exemptions and may provide consultative assistance to CEV (EM) regarding the completion of EPA Form R, Toxic Release Inventory. SGPB knowledge of hazardous chemical usage in industrial processes and evaporative emissions may benefit CEV (EM) when they complete the EPA Form R.

Specific Guidance Relating to February 1994 DoD Guidance

- 3. Multiple Tenants/Sites:
 - a. Other DoD Tenants on Air Force Installations: In cases where non-Air Force DoD tenants conduct operations on an Air Force installation, the supporting Air Force host is responsible for meeting all reporting requirements under EO 12856.
 - b. In cases where non-DoD Federal agencies occupy space on an Air Force installation, each agency is responsible for meeting reporting requirements under EO 12856.

- c. In cases where an Air Force base has geographically separated sites the host installation is responsible for meeting reporting requirements under EO 12856 for these sites. These separate sites may be treated as separate facilities.

Examples: Missile Sites: It is important to determine if the missile sites meet the requirement for reporting (40 CFR 372.22). If the facility has 10 or more full-time employees (or the equivalent of 20,000 hours per year) and it annually manufactures, processes, or otherwise uses (at the missile site) greater than the applicable thresholds, then it must report under Section 313.

- d. In cases where an Air Force installation is contiguous with another DoD function (to include a separate Air Force function), each installation commander is responsible for meeting all reporting requirements under EO 12856 if the two functions are autonomous and no host-tenant agreement exists.

4. Toxic Release Inventory Reporting at Closure Bases (Reference e)

- a. The mechanics of shutting down operations and transferring personnel inherent in the base closure process present both practical and resource barriers to implementing TRI reporting requirements at closing bases. Therefore, DoD has adopted a modified approach to implement the TRI provisions at bases that close before 31 Dec 97. This approach requires Major Command Headquarters to estimate TRI data for these installations based on:

- (1) Actual TRI data at similar active facilities
- (2) Analysis of the nature of the processes carried out at the closing facility
- (3) Relative workload at the closing facility
- (4) Other available information on TRI chemicals at the closing base

- b. Major Command Civil Engineering Headquarters staff will compile the estimated data for closing bases on individual Form R reports and submit the reports to EPA headquarters along with a cover letter signed by a general officer. Because this is a new policy, DoD will not submit these reports for calendar year 1994 until 30 Dec 95.

5. Applying EPCRA Section 313 to Air Force Installations

- a. Air Force policy is to comply with the intent regarding activities that are required to report under EO 12856. Current regulations and practices for private industry limit EPCRA reporting to facilities in the Standard Industrial Classification (SIC) codes 20-39. Even though Air Force installations do not fall within these SIC codes, EO 12856 makes EPCRA applicable to Federal facilities regardless of SIC code. Consequently, the EPA does not have guidance on applying EPCRA to DoD facilities. This Air Force guidance represents HQ USAF's interpretation of the

intent of Executive Order 12856 as it applies EPCRA to Air Force installations. Executive Order 12856 also states that “All other existing statutory or regulatory limitations or exemptions on the application of EPCRA Section 313 shall apply to the reporting requirements set forth in Section 3-304(a) of this order”.

- b. Activities on Air Force installations will report under EO 12856 without regard to their relationship to the primary mission (as described in the February 1994 DoD Guidance) and will apply the exemptions as described in 40 CFR 372.38 and interpreted as follows.
6. Exemptions for EPCRA Section 313: It is important to note that the exemptions allowed under EPCRA Section 313 differ from other sections of the Act. Exemptions that are applicable to Section 312 of EPCRA differ from those of Section 313. It is also important to note that an exemption under Section 313 allows a facility to exclude an exempted chemical from consideration in determining whether the threshold amount of a chemical is present at the facility. Also, if the threshold amount is exceeded as a result of other non-exempt activities at the facility, the facility will not be required to include the exempted amount in its report.
- a. EPCRA Section 313 allows certain exemptions to provide a degree of reporting burden relief for covered facilities by exempting small and ancillary uses of listed chemicals from the reporting requirements. EPCRA however, was not written with Air Force installations in mind in that there is a combination of industrial functions with commercial and domestic activities. Strict application of the exemptions as written in 40 CFR 372.38 would allow Air Force installations to exclude, for example, all products containing toxic chemicals for the purpose of maintaining motor vehicles operated by the facility. This could be interpreted to include cars, trucks, planes, missiles, spacecraft, and other military vehicles. This was not the intent of EO 12856 as it applies to Federal agencies. The intent of EO 12856 is community right-to-know and pollution prevention. On the other hand, the Air Force does not interpret EO 12856 to include reporting requirements for common commercial and domestic activities found on Air Force installations solely for the personal use and enjoyment of military personnel. Therefore, in keeping with the intent of EO 12856 and EPCRA, the Air Force interprets these exemptions as they apply to Air Force facilities as follows:
 - (1) Use Exemptions
 - (a) Structural Component Exemption (40 CFR 372.38(c)(1)): This exemption relieves facilities from reporting toxic chemicals that are structural components of the facility or that are used to ensure or improve structural or functional integrity. This exemption applies to listed chemicals in material that are part of the facility’s structure (e.g., copper in copper pipes used for the plumbing in the facility).

Examples:

Maintenance and repair activities performed by Civil Engineering to the facility infrastructure are consistent with the “structural component” exemption. This would include painting even though volatile solvents in the paint do not become part of the structure.

Infrastructure includes, but is not limited to, buildings, roads, runways, fencelines, and utilities.

- (b) Routine Janitorial and Facility Grounds Maintenance Exemption (40 CFR 372.38(c)(2)): The use of toxic chemicals contained in products used for routine janitorial and facility grounds maintenance are exempt from EPCRA Section 313 reporting. This exemption is intended to cover janitorial or other custodial or grounds maintenance activities using substances, such as bathroom cleaner, or fertilizers and pesticides used to maintain facility lawns, similar in type and concentration (regardless of container size) to consumer products. This exemption was developed for industry to relieve the burden of reporting chemicals used to maintain the grounds around the plant and the day-to-day cleaning of the facility. Chemicals used to maintain the grounds of a facility’s recreational areas are exempt from threshold and release calculations under this exemption.

Examples:

Fertilizers applied to the lawns around buildings, parks, ballfields, golf courses, etc., are exempt from reporting.

Pesticides used by Civil Engineering

Entomology shop are exempt from reporting provided the chemical used is similar to that which is available commercially off base.

Maintenance on shop equipment within a facility such as the use of oil or grease is not exempt.

- (c) Personal Use Exemption (40 CFR 372.38(c)(3)): The personal use exemption applies to the use of listed toxic chemicals in products used by employees or other persons at the facility. This exemption also includes the activities associated with facility-operated cafeterias, commissaries, exchanges, and Morale, Welfare, and Recreation (MWR). Types of products that are used for “personal use” include, for example, foods, drugs, cosmetics, office supplies, or other personal items. The personal use exemption also covers toxic chemicals used strictly for reasons of personal comfort, necessity, or other such purposes.

Examples:

Chlorine that is added to the water supply to prepare potable water for consumption is exempt. However, if additional treatment is necessary to prepare water for an industrial process, those chemicals do not fit the personal use exemption and would be counted towards threshold determinations.

Toxic chemicals present in standard office supply products such as correction fluid or copier machine fluids are exempt as personal use items.

Ammonia used in blueprint machines would not be exempt because this would not be considered “standard” office equipment.

Toxic chemicals used to provide heat, air conditioning, and lighting would be considered exempt under the personal use exemption provided these chemicals are used strictly for reasons of personal comfort and necessity.

Hospitals: Toxic chemicals used for the personal use of employees such as drugs are covered by the Personal Use Exemption. Hospital activities (e.g., sterilization of equipment with ethylene oxide) must be reported if threshold levels are reached at the facility.

- (d) The Motor Vehicle Exemption for Maintenance (40 CFR 372.38(c)(4)) exempts toxic chemicals contained in products used for maintenance activities on motor vehicles operated by a facility. This exemption, provided by rule, was designed to allow manufacturing facilities to avoid tracking small quantities of listed toxic chemicals associated with maintaining vehicles operated by the facility. This has been interpreted by DoD to include base level vehicle maintenance (to include cars, trucks, cranes, forklifts, tow motors, and boats). Large scale restoration or reconditioning (generally contracted out by the Air Force) performed at depot level is not exempt.

Examples:

This exemption includes toxic chemicals found in gasoline, diesel fuel, brake and transmission fluids, oils and lubricants, antifreeze, batteries, cleaning solutions and solvents in paints as long as the products are used to maintain the vehicle operated by the facility.

- (e) Aircraft/Missile Maintenance: The use of listed toxic chemicals in aircraft and missile maintenance activities (e.g., solvents used for parts cleaning and listed chemicals used for painting) will be counted in threshold determinations and release reporting. EPA includes aircraft as a motor vehicle but the exemption of all aircraft maintenance would not be consistent with the Air Force’s interpretation of the intent of EO 12856. Exempted from reporting are certain aircraft maintenance activities necessary to accomplish day-today flying missions, such as adding hydraulic fluid, oil and lubricants, and fuel.
- (f) Motor Vehicle Maintenance Exemption Applied for Fuels: Releases associated with the transfer of fuel and releases from stationary and non-stationary sources of fuel are exempt for EPCRA Section 313 reporting. Emissions from mobile sources are exempt.

Examples:

Releases from tank trucks and bulk storage fuel tanks are exempt

Emission releases from engine test cell operations are exempt

Emission releases from mobile sources such as aircraft, cars, trucks, cranes, forklifts, tow motors, and boats are exempt from reporting.

- (g) Intake Water/Air Exemption (40 CFR 372.38(c)(5)) exempts facilities from reporting toxic chemicals present in process water or no-contact cooling water as drawn from the environment or from municipal sources. The exemption also covers toxic chemicals present in air used either as compressed air or as part of combustion.

2. Laboratory Activity Exemption: (40 CFR 372.38(d)):

- (a) Toxic chemicals manufactured, processed, or otherwise used in a laboratory under the supervision of a technically qualified individual are exempt from reporting. Regulations established under the Toxic Substances Control Act define a technically qualified individual as someone who is capable of understanding the health and environmental risks associated with chemical substances used under their direction due to some combination of education, training, or experience (as defined in 40 CFR 720.3(ee)). This exemption does not apply in the following cases:
 - (1) Specialty chemical production.
 - (2) Manufacture, processing, or use of toxic chemicals in pilot plant scale operations.
 - (3) Activities conducted outside the laboratory.
- (b) The Laboratory Activity Exemption (40 CFR 372.38(d)) applies to those listed toxic chemicals manufactured, processed, or otherwise used in a laboratory for quality control, research and development, and other laboratory activities. It is not intended as a blanket exemption for any facility which has the title "laboratory" in its name. Likewise, the absence of "laboratory" in the name of a facility does not necessarily disqualify a facility's activity(ies) from the laboratory activity exemption. The characteristic of the activity and conditions under which it occurs determine whether the manufacture, process, or otherwise use of a listed toxic chemical qualifies for the laboratory activity exemption. As with the other exemptions, each facility must carefully consider the nature of its activities in determining whether the laboratory activities exemption applies.
- (c) The laboratory activity exemption was intended to reduce the chemical tracking burden of manufacturing facilities that also conduct laboratory activities. The regulations are intended to exempt the facility from tracking small or diffuse quantities of listed chemicals used for quality control, experimental, or certain information-generating purposes (see 53 FR 4503 (16 Feb 88)).
- (d) For a listed chemical to qualify for the laboratory activity exemption, it must meet the following conditions:

- (1) The listed chemical must be used directly in, or produced as a result of a laboratory activity at the installation; and
- (2) The manufacture, process, or otherwise use of the listed toxic chemical must occur under the supervision of a technically qualified individual as defined by the Toxic Substance Control Act (TSCA) regulations 40 CFR 720.3(ee).
 - (e) Activities that do not directly support research and development, sampling and analysis, or quality assurance or control (e.g. listed chemicals used to develop film that was exposed during an experiment, or used to sterilize instruments in a hospital) must be considered for EPCRA section 313 reporting.
 - (f) In addition, specialty chemical production and pilot plant scale activities do not qualify for the laboratory activities exemption. “Specialty chemical production” refers to chemicals produced in a laboratory setting that are distributed in commerce or for use other than in laboratory activities at the facility or elsewhere. Listed chemicals made, processed, or used in a pilot-scale plant operation must also be accounted for because the scale is of sufficient magnitude that the burden of tracking and reporting is presumed to be reasonable (unlike bench-scale operations).
 - (g) If a chemical was produced or used in a laboratory activity, no portion of it can be used in a non-laboratory activity and still be exempt from reporting. If a given batch of chemical is produced or used in a laboratory activity, that batch, or portion of it, is not exempt from reporting requirements when it is used in other, non-laboratory activities. The quantity of listed toxic chemical in materials which are sampled from processing operations and are subsequently sent to a laboratory for quality control purposes may not be subtracted from the total amount of the chemical factored into the facilities threshold determinations.
 - (h) Assuming that a laboratory is under the supervision of a technically qualified person and is not engaged in pilot scale or specialty chemical production, equipment and component testing are interpreted as the equivalent of a laboratory activity and can therefore qualify for the laboratory activity exemption.
3. Article Exemption (40 CFR 372.38 (b)): Quantities of a listed toxic chemical contained in an article do not have to be factored into threshold or release determinations when that article is processed or otherwise used at a facility. An article is defined as a manufactured item that is formed to a specific shape or design during manufacture, that has an end-use function dependent in whole or in part upon its shape or design during end-use, and that does not release a toxic chemical under normal conditions of the processing or otherwise use of that item at the facility. The article exemption applies to the normal processing or otherwise use of an article. It does not apply to the manufacture of an article. Toxic

chemicals processed into articles produced at a facility must be factored into threshold and release determinations.

Example:
Batteries

4. De Minimis Exemption (40 CFR 372.38 (a)): A listed toxic chemical does not have to be considered if it is present in a mixture at a concentration below a specified de minimis level. The de minimis level is 1.0%, or 0.1% if the toxic chemical meets the Occupational Safety and Health Administration's defined carcinogen. The EPCRA Form R instructions document lists the de minimis level for all the toxic chemicals. For mixtures that contain more than one member of a listed toxic chemical category the de minimis level applies to the aggregate concentration of all such members and not to each individually.
5. Property Owners: (40 CFR 372.38 (a)): The Air Force is not required to report if it merely owns the real estate on which a facility covered by EPCRA or E.O. 12856 is located; that is, the Air Force has no "business" interest in the operation of that facility. The operator of that facility, however, may be subject to the reporting requirements.
7. Ordnance: The use of ordnance will not be reported for calendar year 1994.
8. National Security
 - a. The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Section 120(j)(2) provides that EPCRA does not override national security considerations and that any grant of access to classified information under EPCRA will be subject to normal clearance procedures. Section 6-601 of EO 12856 recognizes the overriding national security concerns by providing that Federal agencies will strive to comply with EO 12856 "to the maximum extent practicable, and without compromising national security".
 - b. In addition, Section 6-601 of EO 12856 provides for a presidential exemption from complying with EO 12856 "in the interest of national security." This exemption may be granted, regardless of the classified status of the information in question, at the request of the Secretary of Defense. The process to be followed in obtaining such an exemption is outlined in CERCLA, Section 120(j)(1).
9. Reporting Procedures: Air Force installations will report Section 313 data using EPA's Automated Form R software. This software is available free of charge by calling EPA's EPCRA Hotline, (800) 535-0202. Submission to EPA will be on 3.5 inch, high-density diskettes. Copies of these diskettes will be provided through the Major Command to HQ USAF/CEVV. EPA's Automated Form R reduces the chance of error on both the submitting organization (due to a variety of reasons) and the EPA (due to erroneous data

entry). The copy sent to HQ USAF/CEVV is due 1 Aug 95 and will be used to prioritize Air Force pollution prevention resources to meet the 50 percent reduction goal established by EO 12856.

10. Toxic Chemical Release Reduction Goals: All Air Force installations are to develop written pollution prevention plans by 31 December, 1995 that will set forth the installation's contribution to achievement of the voluntary goal of reducing the DoD's total releases and off-site transfers of TRI chemicals by 50 percent by December 31, 1999. The 50 percent reduction goal is applied on a DoD-wide basis allowing for variation in the achievement of these reductions at individual DoD facilities. However, each DoD facility is expected to come as close to the 50 percent reduction goal as practicable. The baseline for measuring DoD's progress in achieving the 50 percent reduction goal is the first year in which all of DoD's covered facilities have publicly reported releases and transfers of TRI toxic chemicals. For the DoD, the baseline will be calendar year 1994. The baseline will only consist of those chemicals that are reportable under EPCRA section 313 as of January 1, 1994.
 11. Technical Resources
 - a. Air Force Center For Environmental Excellence PRO-ACT consultant services, DSN 240-4214, (800) 223-4356.
 - b. EPA EPCRA Hotline: (800) 535-0202
 - c. EPCRA Handbook for U. S. Air Force. One copy centrally procured by HQ USAF/CEVV for each major installation.
 - d. EPA Toxic Chemical Release Inventory Questions and Answers, Revised 1990 Version (latest), EPA 560/4-91-003. Available from EPA EPCRA Hotline.
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Air Force Guidance for Toxic Release Inventory Reporting:

QUESTIONS AND ANSWERS

- Q. When was Executive Order 12856 signed, and when was it published in the Federal Register?
- A. Executive Order 12856, “Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements,” was signed by President Clinton on August 3, 1993. The Order was published in the Federal Register on August 6, 1993.
- Q. Why did the Air Force eliminate the concept of reporting only those activities associated with the installations “Primary Mission” as described in the February 1994 DoD Guidance?
- A. The Primary Mission concept was included in the February 1994 DoD Guidance as a means of relief to the services of the burden of reporting small and ancillary uses of toxic chemicals. The text of Executive Order 12856 has driven EPA away from the primary mission guidance. Quoting EO 12856:

“The head of each Federal agency shall comply with these provisions without regard to the Standard Industrial Classification (SIC) delineations that apply to the Federal agency’s facilities, and such reports shall be for all releases, transfers, and wastes at such Federal agency’s facility without regard to the SIC code of the activity leading to the release, transfer, or waste. All other existing statutory or regulatory limitations or exemptions on the application of EPCRA section 313 shall apply to the reporting requirements set forth in section 3-304(a) of this order”

- Q. Must Federal facilities pay EPCRA report filing fees to those states that have fee programs?
- A. No. The payment of state filing fees by the Federal government would constitute taxation and the Federal government does not pay taxes to states.
- Q. Since TRI reporting requirements were initially intended for manufacturing facilities, it would seem that only the toxic chemicals used in a manufacturing capacity be considered when calculating threshold quantities. Furthermore, it would be our interpretation that the terms “process” or “otherwise use” as stated in CFR 372.22 apply to toxic chemicals that support, promote and contribute to the manufacturing process. Does EO 12856 override the original intent of Section 313, resulting in reporting toxic chemicals used in all capacities throughout the base?

- A. Yes. EPCRA was written to apply to those facilities with a primary Standard Industrial Classification code of 20-39. However, EO 12856 (3-304) states that “each Federal agency shall comply with these provisions without regard to the Standard Industrial Classification (SIC) delineations that apply to the Federal agency’s facilities, and such reports shall be for all releases, transfers, and wastes at such Federal agency’s facility without regard to the SIC code of the activity leading to the release, transfer, or waste”.
- Q. If state right-to-know laws are more stringent than EPCRA, must Federal facilities comply with the state right-to-know requirements and EPCRA requirements as well?
- A. No. EO 12856 does not require Federal facilities to comply with state and local right-to-know requirements that are more stringent than EPCRA requirements. However, section 5-505 of the Executive Order does encourage such compliance.
- Q. Can EPA fine a Federal facility if the facility does not comply with EO 12856?
- A. No. EO 12856 does not give EPA the authority to fine Federal facilities. However, section 5-504 authorizes EPA to conduct reviews and inspections of Federal facilities as necessary to monitor compliance with toxic release inventory, pollution prevention, and community right-to-know reporting requirements as set out in sections 3-304 and 3-305. Section 5507 requires EPA to report annually to the President on Federal agency compliance with section 3-304 of the Executive Order.
- Q. What are the minimum criteria for a facility to meet that could result in the agency’s having to comply with EO 12856 for that facility?
- A. Each Federal agency will need to examine activities at its various facilities and determine which facilities meet threshold conditions of EPCRA section 313. Facilities can include government-owned contractor-operated (GOCO) facilities. Each Federal agency that either owns or operates a “facility” could potentially be required to comply with this Executive Order for any agency facility that meets certain criteria. For EPCRA section 313, the facility must have 10 or more full-time employees (i.e., 20,000 hours), and must meet or exceed “manufacture” or “process” or “otherwise use” thresholds for a toxic chemical.
- Q. What is a Federal “facility” for EPCRA purposes?
- A. Section 2-201 of EO 12856 incorporates-by-reference definitions found in EPCRA, PPA, and implementing regulations. According to EPCRA section 329(4), a “facility” includes “all buildings, equipment, structures, and other stationary items which are located on a single site or on contiguous or adjacent sites and which are owned or operated by the same person (or by any person which controls, is controlled by, or under common control with, such person).” Under section 2-201 of EO 12856, the definition of “person” in

EPCRA 329(7) is expanded to include Federal agencies, as defined in 5 USC 102 and 105.

- Q. Are Federal facilities on Guam “in the customs territory of the U.S.?”
- A. No. According to the customs regulations, Guam is not “in the customs territory of the U.S.” The “customs territory” includes the 50 states, the District of Columbia, and Puerto Rico. Because the definition of “state” under EPCRA section 329 includes certain territories and possessions outside the customs territory of the U.S. (including Guam, American Samoa, the U.S. Virgin Islands, and the Northern Mariana Islands), Federal facilities located in these U.S. territories and possessions are encouraged to abide in the spirit of EPCRA. Abiding by the spirit of EPCRA means planning for and preventing potential harm to the public through chemical releases, and observing the environmental protection hierarchy in the Pollution Prevention Act (i.e., source reduction, recycling, treatment, and disposal).
- Q. Who is responsible for EPCRA Section 313 reporting for Air Force installations that are contiguous with other DoD installations (e.g., Pope AFB and Fort Bragg)?
- A. If two installations are completely autonomous and one does not provide support for the other under an arrangement such as a host-tenant agreement, then the installations can be considered separate facilities and both report. Although this is not fully consistent with the definition of a “facility”, DoD policy is to report separately. The intent is not to remain under reporting thresholds, but to have realistic management control over the toxic chemicals and the reductions in their release to meet the 50% goal by 1999.
- Q. Who is responsible for EPCRA Section 313 reporting for Air Force installations that are contiguous with Government-Owned/Contractor-Operated (GOCO) facilities when each installation has separate EPA ID numbers and operate independently (e.g., Dobbins ARB and AF Plant 6)?
- A. If the Air Force installation and the GOCO are completely autonomous and the base does not provide support to the GOCO, then separate reports will be submitted.
- Q. Should a facility’s contracted and/or subcontracted work offsite at a non-Federally owned facility be included in Federal EPCRA reporting?
- A. No. Work conducted for a Federal agency at a non-Federally owned facility is not subject to Federal EPCRA activity thresholds. Federal agencies are only responsible for reporting on activities conducted by or for the Federal agency at Federal sites.
- Q. Are office buildings owned by the General Services Administration (GSA) or any other Federal agency considered “facilities” under Executive Order 12856?
- A. Yes. The General Services Administration is an Executive Branch agency as defined in EO 12856. Because any building would be considered a “facility” under EPCRA section 329(4), any office building that GSA (or any other agency) owns or operates could be

subject to the requirements of the Executive Order if an EPCRA activity or reporting threshold for a toxic chemical has been met.

- Q. An agency is operating out of a building that is maintained, leased, or owned by the General Services Administration. Who is responsible for reporting under EPCRA section 313?
- A. Under EPCRA section 313, the owner or operator of a facility is responsible for reporting. If the owner of the facility has a “landlord or real estate interest only” in the operations conducted at the facility, then the obligation for reporting falls to the operator - who typically has the most knowledge of any toxic chemicals used at the facility. In this example, the agency is the operator and responsible for threshold determinations and release calculation - assuming that GSA had a “landlord or real estate interest only” in the facility. (Refer to Q&A # 22 for a more detailed explanation of the term “landlord or real estate interest only.”)
- Q. Under Executive Order 12856, who is responsible for complying with EPCRA section 313 when a Federal agency leases property to a private sector firm? For example, assume the Bureau of Land Management (BLM), DOI, has a 5,000-acre piece of land (broken only by public rights-of-way). BLM leases 1,000 acres to a gas exploration corporation and 1,000 acres to a local farmer for grazing. Who should perform threshold determinations and release calculations?
- A. Under section 313, the owner or operator of a facility is responsible for reporting. According to 40 CFR 372.38(e), if any owner has a “landlord or real-estate interest only” in the property, then the reporting burden falls to the operator, who typically has the knowledge of the listed toxic chemicals used at the facility. The landlord/tenant relationship between the owner and operator must be determined by each federal facility. (Refer to Q&A # 22 for a more detailed explanation of the term “landlord or real-estate interest only.”)

In the example above, if BLM has more than a landlord interest in the lands it leases to a private sector firm(s), then BLM would consider the use of listed toxic chemicals by its tenant(s) in its threshold calculations. If thresholds are exceeded, BLM may choose to file Form R reports separately or jointly with its tenant(s), if the tenant(s) is subject to section 313 reporting. If BLM has only a landlord interest in the leased lands, then only tenants whose operations are classified in SIC codes 20 through 39 and have 10 or more fulltime employees will need to perform threshold determinations separately for EPCRA section 313 and be responsible for submitting a Form R for each listed toxic chemical used in excess of a reporting threshold. BLM is still responsible for reporting on any activities involving listed toxic chemicals above threshold amounts that take place at the remaining property that is not leased.

Q. A Federal agency owns property--either land or a building--and leases that property to another entity. If the agency has no involvement in the operations other than as the lessor, is the agency required to comply with EPCRA section 313 requirements for that covered facility under EO 12856?

A. No. According to 40 CFR 372.38(e), the owner of a covered facility is not required to comply with EPCRA section 313 requirements if that owner's interest in the facility is limited to ownership of the real estate upon which the facility is operated. This interest is often referred to as a "landlord or real-estate interest only." In general, if a Federal agency is in a simple landlord role and receives no service or benefit from a lessee (other than rent or a fee) and is not involved directly in the oversight or operation of the property, then the agency is not required to account for the lessee's activities at that facility under EPCRA section 313. The operator of the covered facility, however, may be subject to the reporting requirements.

An example of an agency's having a "landlord or real estate interest only" is when an agency owns an air field, but is responsible only for supplying the heating and cooling to the buildings at the site. Because the agency does not directly support or provide oversight for the activity at the air field, the agency is considered to have a "landlord or real estate interest only" with respect to the facility. A second example is where a Federal agency leases a building to a manufacturing operation, but is responsible only for building upkeep and repair. Because the agency is in no way involved with the operation or oversight of the facility, it would not be required to report on the activities of that facility as a result of EO 12856.

Q. To what governmental entities should Federal facilities with operations that straddle state or local jurisdictional lines report under EPCRA?

A. The facility should report to all appropriate states or local jurisdictions in which the Federal facility is located.

Q. A Federal facility is composed of two separate establishments and is filing two separate Form Rs for section 313 reporting. For Part I, section 4.5, what SIC codes should the facility list?

A. For a Federal facility that has multiple establishments ("distinct and separate economic activities [that] are performed at a single location"), managers of individual properties have the option of reporting releases as separate establishments as long as the entire facility accounts for all of the releases of toxic chemicals. If a facility is filing separate release reports for each establishment, enter in Facility Identification, Part I, section 4.5 of the Form R report, only the SIC code of the establishment for which data is included in the report. The SIC code for the other establishments at the Federal facility would be included in the Form R reports for those establishments. Also, managers should check that the establishment is "Part of a facility" in Facility Identification, Part I, section 4.2 of the Form R report. Facility owners or operators should be aware that their establishments

may be considered separate facilities and may receive separate TRI facility identification numbers.

Q. An agency entity has buildings and other stationary structures located on multiple properties. All of the properties are contiguous and adjacent to each other. These contiguous and adjacent properties comprise vast tracts of land (e.g., most of Western Colorado). Are these buildings and other stationary structures - which are owned or operated by one agency but managed by several district offices and located on contiguous or adjacent properties - one agency facility for EPCRA reporting purposes?

A. Yes. All of the buildings and other stationary items located on multiple contiguous or adjacent properties are part of one facility for EPCRA reporting. Therefore, the amount of each toxic chemical manufactured, processed, or otherwise used and the number of employees must be aggregated for all of these contiguous or adjacent properties to determine whether the entire facility meets reporting thresholds.

A manager of an individual establishment, however, does have the option of filing as a separate establishment within a multi-establishment facility by submitting a separate Form R for releases and off-site transfers of toxic chemicals, if the aggregate activity and the full-time employee thresholds are met. If a manager chooses to file a Form R report for an establishment, he or she must check that the establishment is "Part of a facility" in Facility Identification, Part I, section 4.2 of the Form R report.

Q. Federally-owned military bases may be occupied by multiple Department of Defense organizations. For example, operations may be simultaneously conducted by the U.S. Marine Corps, the U.S. Army, and the U.S. Navy at a military base. For reporting purposes, would this base be considered one facility or three separate facilities?

A. According to 5 USC 105, all military departments are part of the Department of Defense, a Federal agency. This means that the entire base, regardless of whether multiple DOD organizations conduct operations on the property, is one facility for the purposes of EPCRA reporting, and quantities of toxic chemicals would be aggregated across the facility to determine activity thresholds. DOD is ultimately responsible for ensuring that all non-exempt releases and off-site transfers of the reportable toxic chemical are accounted for in the individual Form R reports.

Q. Who is responsible for EPCRA section 313 reporting when multiple Federal agencies conduct reportable activities (manufacture, process, or otherwise use toxic chemicals in excess of the activity thresholds) at buildings located on one site? For example, the State of Washington owns land and leases buildings to NASA and DOE. DOE is the lessee and sole operator of Building A. NASA is the lessee of Building B; however, DOD and DOT also conduct reportable activities in Building B. DOD's and DOT's operations are not in support of NASA. Are NASA, DOE, DOD, and DOT considered separate facilities?

A. Yes. When multiple Federal agencies manufacture, process or otherwise use toxic chemicals in excess of threshold amounts at buildings located on one site, each Federal agency is responsible for activities conducted by, or solely for, that Federal agency. In the

above example, NASA, DOE, DOD, and DOT are all engaged in separate activities at one site. Each of these agencies would be considered an operator of a separate facility, and would separately determine chemical activity thresholds and report releases if appropriate.

- Q. Who is responsible for reporting under section 313 when a Federal agency leases property to one or more other Federal agencies? For example, the General Services Administration (GSA) owns an office park where five different Federal agencies (e.g., USDA, HHS, DOJ, HUD, EPA) lease five separate buildings.
- A. Under section 313, the owner or operator of a facility is responsible for threshold determinations, release calculations, and appropriate reporting. According to 40 CFR 372.38(e), if any owner has only a real-estate interest in the property, then the reporting burden falls to the operator, who typically has the knowledge of the toxic chemicals used at the facility. In the above example, if GSA (or another Federal agency) leases property to one or more Federal agencies, and GSA has only a lessor relationship with those agencies, each tenant Federal agency would be responsible for performing separate threshold determinations and release calculations under EPCRA section 313. If GSA has more than a landlord interest in the property, then GSA would consider the use of toxic chemicals by its tenants in its threshold determinations. Once thresholds are exceeded, GSA may choose to file one Form R for the entire facility or the tenants may file separate reports.
- Q. If one Federal agency is the primary tenant of a site, and it and other Federal agencies conduct operations on that site, how do those agencies meet EPCRA requirements for the site?
- A. The primary tenant of the site is responsible for reporting under EPCRA if the other agencies' activities on that site are in support of that primary tenant. If the activities conducted by the other agencies on that site are independent of, and do not support the primary tenant, then each agency files its own EPCRA reports.
- Q. Does Executive Order 12856 require non-manufacturing contractors at GOCO facilities to comply with EPCRA section 313 just because non-manufacturing Federal facilities other than GOCO facilities must comply?
- A. No. EO 12856 does not create new or different legal obligations for private parties to report under EPCRA. However, a GOCO facility is also a Federal facility for the purposes of the Executive Order and may have contractual obligations to provide the Federal agency with the information the agency needs to fulfill reporting obligations under this Executive Order. Ultimately, it is the Federal agency that owns the facility and is responsible for ensuring compliance.
- Q. What if the contractor at a GOCO facility conducts operations that meet all of the EPCRA section 313 reporting criteria except for the SIC code classification. Does that Federal facility still have to report?

- A. Yes. The Federal facility must report, not the contractor. EO 12856 makes EPCRA section 313 applicable to Federal facilities without regard to SIC code. The Executive Order also requires each Federal agency to include the releases and off-site transfers from GOCO facilities when meeting the Federal agency's reporting responsibilities.
- Q. Is a Federal agency responsible for reporting the releases and transfers from GOCO's, even if the GOCO is not covered under EPCRA section 313 (e.g., the GOCO is not in SIC codes 2039)?
- A. Yes. Section 1-103 of the Executive Order requires all Federal agencies to include the releases and transfers at all facilities when meeting all of the Federal agency's responsibilities under the Order. Executive Order section 1-104 further requires that Federal agencies take practical steps to obtain the information needed to comply with this Order from existing contractors.
- Q. We have a GOCO that does work for DoD within a larger GOCO that is not controlled by DoD, are we responsible for the whole GOCO?
- A. No. The controlling component is only responsible for reporting the operations of the GOCO that does work for DoD. The reverse is also true. If a DoD GOCO has a GOCO within it that does work for a non-DoD agency, the DoD component responsible for controlling the GOCO is only required to report the operations dedicated to the GOCO work that supports DoD.
- Q. A GOCO facility produces electrical components under contract to the U.S. Department of Energy (DOE). The GOCO contractor conducts all of its activities on property owned by the U.S. Department of Defense (DOD). Although the contractor leases DOD property, it provides no goods or services to DOD. Must DOD or DOE include the contractor's uses of toxic chemicals when performing threshold determinations under EPCRA section 313?
- A. The determination of which agency is responsible for meeting section 313 requirements depends on the interest of those agencies involved. According to 40 CFR 372.38(e), the owner of a covered facility (DOD in this example) is not required to comply with EPCRA section 313 requirements if its interest in the facility is limited to ownership of the real estate upon which the facility is operated.
- If the contractor is the lessee as stated in the question, then DOE does not need to evaluate the contractor's activities because the activities are not being performed at a DOE facility. If the contractor's operations are covered within SIC codes 20 through 39, and the contractor has more than 10 full-time employees, the contractor will need to perform threshold determinations and be responsible for submitting a Form R report for each toxic chemical manufactured, processed, or otherwise used in excess of applicable thresholds.
- Q. A DoD GOCO performs work for DoD at a stand-alone facility but has only a small DoD staff. Does the Component that owns this facility have to report?

A. Yes. The DoD Component that controls the GOCO still must report EPCRA information.

- Q. A GOCO performs only a small percentage of its work for DoD, is the DoD component that owns the facility required to report?
- A. The DoD component that owns the facility is only required the portion of the work that is done for DoD. Existing contracts will have to be modified to enable DoD to report that EPCRA information on that portion of the contractor's work that supports DoD.
- Q. A GOCO produces products for the private sector, and only in the event of mobilization or a "ramp up" will the facility produce items for use by DoD, should the DoD Component that owns the facility report EPCRA information?
- A. No. Because DoD does not control the production at the facility except under special conditions the DoD Component that owns the facility is not required to report EPCRA information. If the facility begins continuous (longer than six months) production for DoD, then the DoD Component that owns the facility will be required to report EPCRA information.
- Q. A GOCO builds aircraft that are sold to foreign governments, non DoD agencies as well as DoD. Is DoD responsible for reporting all EPCRA information dedicated to the production of the aircraft?
- A. The DoD Component that owns the facility should work with the contractor to determine the portion of the production that directly supports DoD. This portion should be factored against EPCRA information to determine the amount of releases and offsite transfers that the DoD component should report to EPA and include in the CY 94 baseline. Alternatively, all the EPCRA information should be reported to EPA but not included in DoDs baseline.
- Q. If a Federal facility has a contractor-operated laboratory on its grounds, is the Federal facility required to report on the laboratory's operations?
- A. If a toxic chemical is being used in a laboratory for research under the supervision of a technically qualified individual, the quantity of the toxic chemical may be exempt from threshold determinations and release reporting under the "laboratory activities" exemption. However, if the Federal facility determines that a significant quantity of the chemical is being used in an exempt activity, the facility should consider whether taking the exemption is consistent with the spirit of EO 12856.
- Q. Executive Order 12856 does not alter a GOCO facility's responsibility to report under EPCRA section 313. As a result, EPA may receive two Form R reports that cover the same releases for a toxic chemical - one from the Federal agency and the other from the government contractor. Has EPA developed a method to avoid double-counting these releases when data are entered into the TRI data base?
- A. Yes. EO 12856 does not alter a GOCO contractor's reporting responsibilities under EPCRA. Contractors will still be required to submit Form R reports if SIC code, full-time employee, and chemical threshold criteria are met. EPA will avoid the potential for double-counting caused by GOCO contractors and Federal agencies reporting for the

same facility through programming changes to the database and associated search structure, or by entering only the more comprehensive, Federal facility data into the TRIS database. (GOCO contractor data would be maintained for compliance and enforcement purposes.)

To help ensure that Federal reports and corresponding GOCO reports are properly identified, EPA is requesting that the Federal agency and contractor staff follow certain procedures to distinguish the Federal facility's Form R reports from the contractor's Form R reports. In particular, Federal facilities and contractors must complete Part I, section 4.1 of the Form R in a specific fashion. For example, part of a Department of Energy facility in Anytown, North Dakota, is operated by a contractor that has a legal obligation to report under EPCRA section 313. In section 4.1, Facility or Establishment Name, DOE would enter: U.S. DOE Anytown Plant. In filling out a separate Form R, the contractor would enter: U.S. DOE Anytown Plant - contractor name, in section 4.1.

In addition, a Federal facility will be asked to submit copies of the contractor's Form R reports along with the Agency's Form R reports. If a Federal facility is unable to obtain the contractor's Form R reports, the facility must, at a minimum, provide the following information in a cover letter:

Contractor name;
Contractor's technical contact; and
Contractor's TRI facility name and address.

- Q. Will chemicals be added to or subtracted from the EPCRA toxic chemical and extremely hazardous substance lists?
- A. Yes. The EPCRA lists have evolved since the statute was passed in 1986. As more information has become available on the hazards and toxicity of chemicals, EPA has responded by identifying chemicals to be added to or taken off the EPCRA lists; EPA expects to continue this activity. When chemicals are added to or taken off the EPCRA lists, EPA always publishes a notice in the Federal Register. The trade press also reports changes to the EPCRA lists.
- Q. How does a Federal facility determine what toxic chemicals it has on-site?
- A. There are many ways a Federal facility can identify the toxic chemicals it has on-site. Here are some: (1) look for Material Safety Data Sheets (MSDS); (2) look at acquisition and procurement records; (3) examine existing environmental permits; (4) review process engineering records; and (5) look at chemical composition sheets provided by vendors. The

“Air Force Guidance for Toxic Release Inventory Reporting” (atch 1) provides the

of consistent, defensible, and on-time reports. Attachment 2 contains some common questions and answers to assist in completing the TRI reports.

This guidance is a coordinated effort between HQ USAF/CEV and AFMOA/SGP.

L. DEAN FOX, Colonel, USAF
Director of Environment
Office of The Civil Engineer

Attachments:

1. Air Force TRI Guidance
2. Questions & Answers

cc:

SAF/MIQ/PAM

HQ USAF/LGMM/LGSP

AFMOA/SGP

HQ AFCEE/EP

AF SA/JACE

LSA/JACE

Air Force Guidance

For Toxic Release Inventory Reporting as specified by Executive Order 12856

“Federal Compliance With Right-to-Know Laws and Pollution Prevention Requirements”

References:

HQ USAF/CVA Memo, 14 Feb 94, Executive Order 12856, "Federal Compliance With

ents”

(b) HQ USAF/CEV Memo, 28 Feb 94, DoD Implementing Guidance for Executive Order 12856, “Federal Compliance With Right-to-Know Laws and Pollution Prevention Requirements”

(c) AFI 32-7080, 12 May 94, “Pollution Preventaon Program”

ion Program”

ams”

(e) DUSD(ES) Memo, 28 Nov 94, to the Assistant Administrator, Office of Enforcement and Compliance Assistance, EPA For purposes of this guidance, reference (b) will from here on be referred to as the “February 1994 DoD Guidance”.

General Guidance

1. Purpose: The intent of this guidance is to 1) provide clarification of the February 1994 DoD Guidance and 2) define Air Force policy on complying with Section 313 of EPCRA as specified by Executive Order 12856 (herein referred to as EO 12856) on Air Force installations.

Successful implementation of EO 12856 requires Air Force-wide consistency in interpretation and application of the Environmental Protection Agency’s (EPA) regulations pursuant to EPCRA (40 CFR Part 372 - Toxic Chemical Release Reporting:

Community Right-to-Know). Similarities among the missions and operations of these mandate consistent compliance and reporting procedures. This document presents Air Force policy and guidance that provides the foundation for consistent, on-time, and defensible implementation and execution of EO 12856 as it applies to EPCRA Section 313 at Air Force installations.

2. Roles and Responsibilities:

a. HQ USAF:

(1) HQ USAF/CEV develops and oversees implementation of Air Force policy for

oversees implementation of Air Force policy for EPCRA Section 313 and the Pollution Prevention Act (PPA). The Pollution Prevention Division (HQ USAF/CEVV) is the

(OPR) for Toxic Release Inventory (TRI) reporting and related requirements. The Environmental Compliance Division (HQ USAF/CEVC) is the OPR for EPCRA Section 313 compliance issues ensuring that TRI data correlate with analogous data provided by the Air Force to the EPA under other environmental programs, i.e., Clean Water Act, Clean Air Act, and the Resource Conservation and Recovery Act.

b. AFMOA/SGPA Responsibilities: HQ AFMOA/SGPA develops the Medical

he Medical Service Environmental Quality and Occupational Health Programs for AF/SG,

and performs program implementation and execution oversight.

c. Major Command Responsibilities: Provide guidance and oversee compliance with EO 12856 at their installations. Forward to HQ USAF/CEVV a copy of each installation's EPA Form R (as specified by paragraph 8, Reporting Procedures, of this guidance) submitted to EPA by your installations.

for installations.

d. Installation Responsibilities: Take action to comply with EO 12856.

(1) Civil Engineering Environmental (Environmental Management (EM)): Base level CEV (EM) is responsible for completing and submitting to the appropriate regulatory agency and submitting to the appropriate regulatory agencies, an EPA Form R for each listed toxic chemical exceeding EPCRA Section 313 thresholds. The general guidelines listed below should be referenced when preparing EPA Form R's:

(a) Maintain thorough documentation: Document all data, assumptions, estimations, process diagrams, and calculations used to prepare EPCRA Section 313 reports. Documentation of data showing that reporting thresholds were not met is as important as documentation used to develop release reports on those chemicals meeting thresholds. All reports on those chemicals meeting thresholds. All documentation must be kept for at least three years from the date of the report. Ensure EPCRA Section 313 records are accessible, complete, clear, and auditable by regulators.

(b) Use available data: EPCRA does not mandate installation of monitoring devices to obtain exact release data. Engineering estimates based on information available is a valid method to compute releases. If exact data is available, use it; if not, make reasonable and auditable assumptions.

(c) Ensure consistency with other installation reports: EPCRA release reporting must be coordinated with other data reported in compliance with other regulatory requirements,

and the Resource Conservation and Recovery Act. Don't allow inconsistencies to be reported. If errors are found, make adjustments to those reports found to be in error and report the

ial with existing permits.

- (d) Submit reports on-time: Prepare the reports to the best of your ability and submit them to the appropriate organization. Forward to your MAJCOM a copy of each EPA

appropriate organization. Forward to your MAJCOM a copy of each EPA Form R (as specified by paragraph 8, Reporting Procedures, of this guidance) compiled and submitted to EPA.

information discovered after a report is submitted can be provided in an updated report. Updated

submitted at any time without violating EO 12856 requirements.

(e) Document progress towards reduction goals: Every installation should track toxic chemical reduction efforts based on releases reported on the CY94 baseline reports. Installation efforts to contribute to DoD's 50% reduction goal in toxic chemical releases on goal in toxic chemical releases and off-site transfers should be documented by 31 December 1995 in the installation Pollution Prevention Management Plan.

(2) Hazardous Material Phceives no mail at this location, the facility should report the mailing address information in the space provided in Part I, section 4, 4.1.

Q. How should a Federal facility begin tracking releases, on-site waste management and source reduction activities, and offsite transfers involving reportable toxic chemicals?

A. Federal facilities can access much of the information needed to calculate releases, on-site waste management activities (i.e., disposal, treatment, recycling, and energy recovery), and off-site transfers from sources at the site. For example, a release through an air stack or to a receiving stream may be estimated from the appropriate air and water permits. Permit applications may also include the mathematical equations that were used to calculate permitted release amounts. These equations potentially could be modified and used to calculate releases for section 313 reporting purposes. Reaction equations and engineering notes also may provide a good source of information for release calculations and on-site waste management activities. For off-site transfers, annual or biannual RCRA reports provide an excellent source of information. These reports refer to specific hazardous waste manifests. From the manifests, off-site transfers can be estimated. Invoices and shipping receipts are essential if a reportable toxic chemical that is not a RCRA waste, is sent offsite for recycling or disposal.

Q. How does a Federal facility determine if it has met the 10 or more full-time employee threshold under section 313?

A. A "full-time employee" for the purpose of section 313 reporting, is defined as 2,000 work-hours per year. In other words, if the total number of hours worked by all employees is 20,000 hours or more, the Federal facility meets the "full-time employee" threshold.

Q. Does the full-time employee determination include the hours worked by field, clerical, or professional staff whose office is in the same building as the production staff actually using the toxic chemical?

A. Yes. The facility must count all hours worked by all employees toward the facility's employee determination, regardless of where the employees are on the facility grounds. Hours worked off-site by administrative support or other staff employed by the facility also count toward the facility's employee determination if such work is performed for the

benefit of the facility. The facility also must count any hours worked on-site by the facility's contractors.

- Q. An agency performs different activities at one location. For which activities should the agency count quantities of any toxic chemical in making its section 313 threshold determinations?
- A. All quantities of section 313 chemicals "manufactured, processed, or otherwise used" in all non-exempt activities at a facility should be counted in threshold determinations.
- Q. If a Federal facility manufactures 19,000 pounds of a toxic chemical and imports another 7,000 pounds of that same chemical during the reporting year, is the facility required to report for this chemical?
- A. Yes. For the reporting year, the Federal facility would have exceeded the manufacture threshold of 25,000 pounds ($[19,000 \text{ manufacturing}] + [7,000 \text{ importing}] = 26,000$) for this toxic chemical. Note that importing is the equivalent of manufacturing, and therefore the two "manufactured" quantities must be added for threshold determinations.
- Q. If a Federal facility's supply system imports a toxic chemical in excess of a threshold amount, is the facility required to report releases of that toxic chemical under section 313?
- A. Yes. Under the authority of EPCRA section 313, EPA defines "manufacture" to mean produce, prepare, compound, or import (40 CFR 372.3). If a Federal facility causes more than 25,000 pounds of a toxic chemical to be imported, it has exceeded the "manufacture" threshold and is subject to the release reporting requirements for that toxic chemical. A facility would "cause" a toxic chemical to be imported by specifically requesting a product (containing the toxic chemical) from the a foreign source or requesting a product known to be only available from a foreign source. If, after receipt, the Federal facility processes 25 thousand pounds or otherwise uses 10 thousand pounds of that chemical, then the Federal facility must report releases of that chemical.
- Q. If a toxic chemical is purchased in the U.S., shipped out of the country to a U.S. facility located overseas, and then brought back to the U.S., is this toxic chemical "imported?"
- A. As long as a toxic chemical remains under U.S. government control, although it may leave the country and later re-enter, it is not "imported" for purposes of EO 12856.
- Q. If a Federal facility buys 10,000 pounds of a listed chemical in 1993 and creates a mixture, (for example a metal cleaning bath), and then uses the bath in 1993 and 1994, how does it determine section 313 thresholds for each year?

- A. In this situation, the section 313 threshold applies to the total amount of the chemical “otherwise used” during the calendar year. For the first year (1993), the Federal facility would count the entire 10,000 pounds of the toxic chemical and any amount added to the bath during that year toward the “otherwise use” threshold. During the second year (1994), only the amount of the chemical added to the bath during that year would be counted toward the section 313 “otherwise use” threshold determination.
- Q. Are warehouses subject to the threshold determinations of section 313?
- A. Warehouse operations can require threshold determinations. Thresholds are based on manufacture, process, or otherwise use of a toxic chemical at the facility. Repackaging (e.g., pouring the contents of a 55 gallon drum into smaller containers) at a warehouse is considered processing and the repackaged quantities of the toxic chemicals must be counted in the facility’s “process” threshold determinations. Simply receiving, storing, relabelling, distributing, or reshipping already pre-packaged quantities from a shipment of such packages is not considered “manufacture, process, or otherwise use.”
- Q. A Federal agency is remediating a toxic chemical that was released a number of years earlier. Must the Federal facility include the toxic chemical being remediated in threshold determinations, release calculations, and reporting?
- A. Quantities of remediated toxic chemicals are not included in section 313 threshold determinations, because remediation is not “manufacturing, processing, or otherwise use.” However, if the Federal facility engages in other activities involving the same toxic chemical, and exceeds the manufacturing, process, or otherwise use thresholds for the chemical; the facility must report releases, transfers, or other appropriate quantities of that toxic chemical that occur as a result of the remediation activities.
- Q. A private contractor conducts recycling operations involving toxic chemicals on-site at many Federal facilities. The contractor conducts these operations under contract to the Federal facilities, but the contractor owns and operates the equipment. Must a Federal facility consider operations like this in making threshold determinations and release calculations for section 313 toxic chemicals, if the Federal facility does not own or operate the stationary items used in the recycling operations?
- A. Yes. A Federal facility should include the toxic chemicals used in operations of contractors under its control in threshold determinations and release reporting for section 313, even if the Federal facility neither owns or operates the equipment used in the contractor’s operations. In the above example, the private contractor, under contract to the Federal facility, conducts recycling operations involving toxic chemicals on-site at a Federal facility, and uses equipment that the contractor owns and operates. The contractor is under the control of the Federal facility, and the facility should include the toxic

chemicals used in the contractor's operations in facility threshold determinations and release reporting.

Q. A Federal facility allows a company to apply waste oil containing a toxic chemical on unpaved roads to control dust. Does the facility have to consider the quantity of a toxic chemical applied in the waste oil for its threshold determinations and release calculations?

A. Yes. In its threshold determinations and release calculations, the facility would include the quantity of any toxic chemical contained in the waste oil applied to its unpaved roads to control dust, because the facility is otherwise using the chemical. Even though the waste oil is used in grounds maintenance, the oil is not a product that is available in a similar type or form as a consumer product.

Q. How do I report on fuel burned at our facility?

A. Facility is defined under 40 CFR 372.3 as "all buildings, equipment, structures, and other stationary items which are located on a single site ...".

Aircraft Fuel: Since aircraft are not stationary items, the releases associated with the combustion of aircraft fuel would not be reported.

Motor Vehicle Fuel: Since vehicles also are not stationary items, the releases associated with the combustion of motor vehicle fuel would not be reported.

Facility Equipment Fuel: The motor vehicle exemption does not apply to use of fuel or lubricants for stationary process equipment such as pumps or compressors. Likewise, fuels used for furnaces, boilers, heaters, or any stationary source of energy are not exempt (the personal use exemption could apply in this case for fuel burned to provide heat for employee comfort provided this is the intended use of the fuel).

Q. Are the toxic chemicals contained in fuel used to refuel an aircraft operated by a Federal facility exempt from threshold determinations and release reporting?

A. Yes. Toxic chemicals contained in fuel used to refuel an aircraft that is operated by a Federal facility are exempt from threshold determinations and release calculations because of the "motor vehicle maintenance" exemption.

Q. Is the use of ethylene glycol to de-ice wings of aircraft operated by a facility exempt from the requirements of EPCRA section 313 under the "motor vehicle maintenance" exemption?

- A. Yes. The use of ethylene glycol to de-ice wings of aircraft operated by a Federal facility is considered to be a form of motor vehicle maintenance. Because of the “motor vehicle maintenance” exemption, the ethylene glycol is exempt from the requirements of EPCRA Section 313.
- Q. Do the exemptions available under EPCRA section 313 apply to Federal facilities?
- A. The exemptions listed under EPCRA section 313 apply to Federal facilities in exactly the same way as they apply to industry.

ARTICLES

- Q. In its manufacturing operations, a Federal facility uses a catalyst that is in pellet form and contains a toxic chemical. No releases of the toxic chemical occur during the use of the pellets. Is this catalyst an “article,” making the quantity of toxic chemicals in the pellets exempt from release reporting under EPCRA section 313?
- A. Under 40 CFR 372.3, an “article” is “a manufactured item which: (1) is formed to a specific shape or design during manufacture; (2) has end use functions dependent in whole or in part upon its shape or design during end use; and (3) does not release a toxic chemical under normal conditions of processing or use of that item at the facility or establishment.” Some catalysts are formed to a specific shape and their end use functions are dependent on this shape (e.g., spore structure, internal surface area). Many catalysts, however, degrade during use and could release over 0.5 pounds of a toxic chemical over the course of a year. All three of the above conditions must be met if the quantity of the toxic chemical in the catalyst is to qualify for the “article” exemption.
- Q. Is the lead contained in batteries exempt from threshold determinations and release reporting under EPCRA section 313?
- A. If a battery containing lead is used as an “article,” and there are no releases of lead from the battery (e.g., the battery is maintenance free), then the lead would be exempt under the “article” exemption (40 CFR 372.38(a)) from threshold determinations and release reporting.
- Q. A Federal shipyard facility cuts port-holes into metal plates separated by seams. The plates contain nickel, and cutting them releases fumes. The facility then produces grindings when it further grinds the metal port hole to its final shape. For the plates to retain “article” status under EPCRA section 313, total releases to all media must be less than 0.5 pounds/year. Does this cut-off value apply separately to releases from each type of “processing” or “otherwise use,” or to aggregate releases from all “processing” or “otherwise use” of the same type of item?
- A. The 0.5 pounds/year release cut-off value applies to aggregate releases from the same type of item being processed or otherwise used in any manner at the facility. This value applies to the total aggregate releases of the toxic chemical from both steps of the process. Therefore, to reach the 0.5 pounds/year value, a facility should add any releases from grinding to those from cutting.

DE MINIMIS

- Q. A Federal facility “otherwise uses” toluene, a toxic chemical, in two ways. In one “otherwise use,” toluene is in a product below the de minimis level, and is therefore exempt from threshold determinations and release reporting under EPCRA section 313. In the second “otherwise use,” toluene is in a product in an amount greater than the de minimis level and is used in excess of the 10,000-pound “otherwise used” threshold. Because the facility must prepare a Form R for toluene, must the facility report all of the releases and off-site transfers in the report, including those that qualified for the “de minimis” exemption?
- A. No. If a facility has multiple uses of a single toxic chemical, and one of those uses meets the criteria for an exemption, then the quantity of the toxic chemical that meets the criteria for the exemption is exempt from threshold determinations and release reporting requirements. In the above example, the facility must file a Form R for toluene and must report all releases and off-site transfers of toluene that result from all non-exempt uses of the chemical.

LABORATORY ACTIVITIES

- Q. Are laboratories exempt from EPCRA section 313 reporting?
- A. Not necessarily. The type of the laboratory activity and conditions under which the activity occurs determine whether the quantity of a toxic chemical manufactured, processed, or otherwise used qualifies for the “laboratory activities” exemption. Agency managers should not assume that quantities of toxic chemicals are automatically exempt from section 313 requirements because the facility has “laboratory” in its name. The listed chemical must be used directly in, or produced as a result of, a laboratory activity at the Federal facility; and the manufacture, process, or otherwise use of the listed chemical must occur under the supervision of a “technically qualified individual” as defined in 40 CFR 720.3(ee). Nonexempt activities include not only the use of a toxic chemical in an experiment, but also toxic chemicals used to clean laboratory glassware and maintain laboratory equipment. Toxic chemicals in pilot plant scale operations, laboratories that produce specialty chemicals, and activities conducted outside the laboratory (e.g., wastewater treatment, photo processing) are not exempt.
- Q. A laboratory (e.g., quality control, area control, etc.) is part of a Federal facility. Are the toxic chemicals associated with the laboratory activities exempt from the threshold determinations and release reporting requirements of section 313, even if the facility as a whole is not exempt from section 313 requirements?

- A. Under authority of EPCRA section 313, EPA issued a “laboratory activities” exemption (40 CFR 372.38(d)) that applies to quantities of toxic chemicals manufactured, processed, or otherwise used in a laboratory for quality control, research and development, and other laboratory activities. The quantities of toxic chemicals associated with the laboratory activities are exempt from threshold determinations and release reporting as long as the chemicals are: Used directly in, or produced as a result of, a laboratory activity; Manufactured, processed, or otherwise used under the supervision of a “technically qualified individual” as defined under 40 CFR 720.3(ee); and Not part of specialty chemical production or pilot plant scale activities.

If a laboratory is part of a larger facility, only those toxic chemicals used in laboratory activities can be considered for the exemption. A facility must still determine if quantities of toxic chemicals used in other activities trigger any activity threshold (i.e., manufacture, process, or otherwise use).

- Q. A Federal facility sends samples of manufactured products containing toxic chemicals to an on-site laboratory for quality control purposes. Are the quantities of the toxic chemicals contained in the samples exempt from the facility’s EPCRA section 313 threshold determinations as a result of the “laboratory activities” exemption (assuming all other “laboratory activities” exemption criteria are met)?

- A. No. Under section 313 of EPCRA, Federal facilities are required to include in their threshold determinations any quantity of a toxic chemical that is manufactured, processed, or otherwise used. The “laboratory activities” exemption (40 CFR 372.38(d)) only applies to the toxic chemicals used within the laboratory setting, not to the on-site manufacturing, processing, or otherwise using (and associated releases) of the toxic chemical prior to the time the sample was sent to the laboratory.

- Q. Are the toxic chemicals used in the following marine engine testing operations exempt from threshold determinations or release reporting requirements of EPCRA section 313 under the “laboratory activities” exemption: (a) testing production engines intended for sale in specialized engine test cells;

- (b) testing engines for research and development purposes in specialized engine test cells; © testing for research and development purposes in open water bodies?

- A. Yes. All of the noted operations are considered “product testing,” and the toxic chemicals used in the “product testing” are exempt from the threshold determinations or release reporting requirements of EPCRA section 313 under the “laboratory activities” exemption.

- Q. A toxic chemical is used in an experiment at one Federal facility (in a manner consistent with the “laboratory activities” exemption criteria) and is moved to another,

non-contiguous facility to continue the experiment. The toxic chemical used in both laboratory activities meets the criteria for claiming a “laboratory activities” exemption under EPCRA section 313. Can the toxic chemical be moved from one facility to another to continue an experiment and remain exempt under the “laboratory activities” exemption for threshold determinations and release reporting?

- A. Yes. If a Federal facility conducts experiments using a toxic chemical, and that toxic chemical is moved from one laboratory to another laboratory at a different facility to continue the experiment, the quantity of the toxic chemical used in the experiment is exempt from threshold determinations and release reporting if both laboratories’ activities qualify under the EPCRA section 313 “laboratory activities” exemption (40 CFR 372.38(d)).
- Q. A research laboratory at a Federal facility uses a toxic chemical in an experiment that is carried out under the supervision of a technically qualified individual. Additional quantities of the same toxic chemical are also used at the Federal facility for non-laboratory activities. Which quantities of the toxic chemical must be included in threshold determinations and release calculations?
- A. The Federal facility may exclude the quantity of the toxic chemical used in the exempted laboratory activity from threshold determinations and release reporting. All other quantities of the toxic chemical that are not included in the “laboratory activities” exemption and are not otherwise exempt (e.g., routine janitorial and facility grounds maintenance) must be included in threshold determinations and release calculations.
- Q. A Federal facility tests specific components of a machinery line. The facility’s functions include testing for durability of the engines, hydraulic systems, power trains, electrical systems and transmissions; building prototypes of products; and qualitative and quantitative analytical materials testing in a chemical laboratory. Because these activities are test-, development-, and research-oriented, are the toxic chemicals used in these activities eligible for the “laboratory activities” exemption?
- A. Yes. Equipment and component testing are the equivalent of a laboratory activity. Thus, the toxic chemicals used in these activities qualify for the “laboratory activities” exemption (40 CFR 372.38(d)) and are exempt from the threshold determinations and release reporting requirements of EPCRA section 313.
- Q. The “laboratory activities” exemption under EPCRA section 313 does not apply to “specialty chemical production.” What is “specialty chemical production?”
- A. “Specialty chemical production” is producing toxic chemicals in a laboratory setting and distributing these chemicals in commerce, or using them in non-laboratory activities at the same Federal facility or elsewhere. For the purposes of compliance with EO 12856,

the term “distributed in commerce” includes shipping to other Federal or non-Federal facilities.

MOTOR VEHICLE MAINTENANCE

Q. What activities related to motor vehicles are reportable under EPCRA section 313?

A. The quantity of a toxic chemical used in motor vehicles that are operated by a Federal facility is exempt from threshold determinations and release calculations. This includes any product used in or on the vehicle to maintain or operate the vehicle (except aircraft and missiles, see section 6a(1)(e) “Aircraft/Missile Maintenance” of the AF TRI guidance).

Q. Must a Federal facility include the quantity of toxic chemicals in vehicle exhaust emissions in annual facility release estimates under EPCRA section 313?

No. Toxic chemicals used to maintain motor vehicles operated by the facility are exempt from threshold determinations and release calculations under the “motor vehicle maintenance” exemption. The release or coincidental manufacture of toxic chemicals from an activity that meets the criteria for an exemption are themselves exempt. Therefore, vehicle exhaust emissions should not be counted toward threshold determinations or release calculations if the vehicle is operated by the facility.

PERSONAL USE

Q. Should quantities of toxic chemicals present in office supplies and similar products be included in threshold determinations or release reporting under EPCRA section 313?

A. No. EPA does not require a covered Federal facility to account for quantities of toxic chemicals in office supplies (e.g., correction fluid, copier machine fluids, etc.) when the facility performs threshold determinations or release reporting. Although toxic chemicals in office supplies are not specifically exempt in the regulation, EPA interprets these items to be personal use items and the chemicals contained in them are exempt from threshold determinations and release reporting under the “personal use” exemption.

Q. A printing shop within a Federal facility uses cylinders of ammonia gas in blueprint machines. The shop uses a total of 12,000 pounds per year in this operation and does not manufacture, use, or process any other quantities of ammonia. Is the quantity of ammonia used in the blueprint machines equivalent to an office supply item and exempt from the reporting requirements of EPCRA section 313 because of the “personal use” exemption?

A. No. Blueprint machines are not considered typical office supply items, and, therefore, the chemicals used in them do not meet the criteria for the “personal use” exemption under

EPCRA section 313. (See 40 CFR 372.38(c)(3).) Because the Federal facility uses 12,000 pounds per year of ammonia, the facility exceeds the 10,000-pound “otherwise use” threshold and must report for ammonia.

- Q. Military bases include areas designated for private housing and barracks. Can the “personal use” exemption under EPCRA section 313 be applied to toxic chemicals used at military housing (e.g., heating oil, janitorial chemicals, pesticides)?
- A. Toxic chemicals in products commonly used at military bases could be exempt from EPCRA section 313 requirements for various reasons. For example, a toxic chemical in heating oil used solely for employee comfort is exempt because of the “personal use” exemption (40 CFR 370.39(c)(3)). Chemicals in pesticides or fertilizers used to maintain lawns or facility grounds would be exempt under the “routine janitorial and facility grounds maintenance” exemption (40 CFR 372.38(c)(2)). Chemicals in substances used to clean or disinfect showers or restrooms could also be exempt under the “routine janitorial and facility grounds maintenance” exemption if the toxic chemical is present in a similar type or form as a consumer product.
- Q. Are base hospitals covered by Section 313?
- A. Toxic chemicals used for the personal use of employees such as drugs are covered by the Personal Use Exemption. Hospital activities (e.g., toxic chemicals used for X-ray development) must be reported if threshold levels are reached at the facility.
- Q. Some Federal facilities have on-site firing ranges that are available exclusively for facility personnel to use for recreational target practice. Would quantities of toxic chemicals used at these firing ranges (e.g., lead contained in bullets) be included in threshold determinations and release calculations under EPCRA section 313?
- A. The quantity of toxic chemicals used at a recreational firing range located at a Federal facility would be exempt from threshold determinations and release reporting under the “personal use” exemption only if the range is used exclusively for recreational purposes. If, however, firing practice is required by the facility to improve job performance, then the toxic chemicals used at the firing range would be subject to the requirements of EPCRA section 313, because the practice is for mission-oriented purposes and is considered “otherwise use.” Also, if the firing range is used for both recreational and non-recreational purposes, only the quantity of the toxic chemical used for non-recreational purposes must be included in threshold determinations and release calculations.

STRUCTURAL COMPONENT

- Q. Would the maintenance of a runway be exempted under structural component use?

- A. Yes. Maintaining the physical integrity of a runway is exempt.
- Q. A Federal facility purchases wood pilings treated with creosote-tar to support its piers. Gradually, the creosote, a toxic chemical, is released from the pilings into the water. For purposes of complying with EPCRA section 313, is the creosote exempt from threshold determinations and release reporting under the “structural component” exemption?
- A. Yes. Releases of a toxic chemical from a structural component as a result of natural degradation are exempt from threshold determinations and release reporting under EPCRA section 313. Because the pilings are incorporated into the facility’s structures (i.e., docks), the creosote contained in the pilings is exempt as a structural component. (See 40 CFR 372.38(c)(1).)
- Q. If a Federal facility builds a new structure or modifies an existing structure on-site, must the facility include toxic chemicals that are part of the new structure (e.g., the copper in copper pipes) in threshold determinations and release reporting under EPCRA section 313?
- A. No. Toxic chemicals that are incorporated into the structural components of a Federal facility (e.g., the copper in copper pipes) or that are used to ensure or improve the structural integrity of a structure (e.g., paint) are exempt from threshold determinations and release reporting requirements because of the “structural component” exemption (40 CFR 372.38(c)(1)). As a result of the exemption, the Federal facility is also not required to report the releases of toxic chemicals that result from “passive” degradation (degradation or corrosion that occurs naturally in structural components of facilities).
- Q. A Federal facility operates stationary cranes at a port. When painting the cranes, volatile solvents are released to the atmosphere. Does the facility have to report these releases under EPCRA section 313, or is such an activity exempt under the “structural component” exemption?
- A. The “structural component” exemption under EPCRA section 313 (40 CFR 372.38(c)(1)) applies to toxic chemicals that are structural components of the facility or that are used to ensure or improve the structural integrity (e.g., copper in copper pipes used for the plumbing in the facility, paint). If the cranes are fixed, then they would be considered part of the structure of the facility. Painting conducted to maintain their physical integrity, therefore, (e.g., prevent natural degradation) is consistent with the “structural component” exemption, even though volatile solvents in the paint do not become part of the structure.
- Q. Does the “structural component” exemption under EPCRA section 313 apply equipment which regularly suffers abrasion, such as grinding wheels and metal-working tools? What criteria can a Federal facility use to decide which pieces of equipment are structural components and which are not?
- A. The EPCRA section 313 “structural component” exemption (40 CFR 372.38(c)(1)) would not apply to grinding wheels and metalworking tools. Because of the nature of their use, these items are intended to wear down and to be replaced, which would be considered

“active” degradation. The “structural component” exemption only applies to “passive” or natural degradation of structures and equipment such as pipes.

ROUTINE JANITORIAL OR FACILITY GROUNDS MAINTENANCE USE

- Q. An agency entity cleans prison cells as part of its routine janitorial practices. Are the toxic chemicals used in these activities exempt from threshold determinations and release reporting requirements under the “routine janitorial or facility grounds maintenance” exemption of EPCRA section 313?
- A. Yes. Toxic chemicals used in routine janitorial activities, such as those contained in cleaning products used when cleaning prison cells, are exempt under the “routine janitorial or facility grounds maintenance” exemption from both threshold determinations and release reporting requirements of EPCRA section 313, as long as the products are similar in type or concentration to those available to consumers.
- Q. Is facility equipment maintenance included under “routine janitorial maintenance?”
- A. Process-related equipment maintenance in support of the major functions of the facility should not be covered by the routine janitorial/facility grounds maintenance exemption.
- Q. Are toxic chemicals used to maintain recreational components of a Federal facility subject to EPCRA section 313 reporting requirements?
- A. No. Toxic chemicals used to maintain a facility’s recreational activities (e.g., cleaning swimming pools) are exempt from EPCRA section 313 threshold determinations and release reporting requirements under the “routine janitorial or facility grounds maintenance” exemption (40 CFR 372.38(c)(2)).
- Q. A Federal training facility disinfects the bathroom floors of the barracks using a cleaning solution that contains a toxic chemical. The cleaning solution is purchased in 50-gallon drums, but the concentration of the toxic chemical is exactly the same as the concentration found in a consumer product. For the purposes of EPCRA section 313, is the quantity of the toxic chemical in the solution exempt under the “routine janitorial or facility grounds maintenance” exemption, or does the size of the container negate this exemption?
- A. A toxic chemical that is part of a cleaning solution purchased in a concentration similar to available consumer products and used in routine janitorial activities, is exempt from EPCRA section 313 reporting requirements under the “routine janitorial or facility grounds maintenance” exemption regardless of the size of the packaging.
- Q. Would all janitorial or other custodial activities performed at a Federal hospital qualify for the “routine janitorial and facility grounds maintenance” exemption? In particular, would toxic chemicals used to sterilize rooms and equipment be exempt from the threshold determinations and release reporting requirements of EPCRA section 313?
- A. A Federal hospital that uses a product containing a toxic chemical similar in type or concentration to a consumer product may exempt the quantity of the toxic chemical from threshold determinations or release reporting if the hospital uses the product for janitorial

activities (e.g., cleaning hallways and rooms). However, products containing toxic chemicals that are used at a Federal hospital to sterilize equipment are subject to threshold determinations and release reporting, because sterilizing equipment is considered an operational or equipment maintenance activity not a routine janitorial activity.

WATER INTAKE/COMPRESSED AIR USE

- Q. Would a toxic chemical present in compressed air be exempt under the “intake water and/or air” exemption under EPCRA section 313? What if the same toxic chemical is present in process emissions?
- A. The “intake water/air” exemption of EPCRA section 313 (40 CFR 372.38(c)(5)) exempts the use of toxic chemicals present in air used either as compressed air or as a part of combustion. The quantity of toxic chemical in the compressed air would be exempt from threshold determinations. If that same toxic chemical is present in air emissions only because it was in the compressed air fed to a piece of equipment or process, then the toxic chemical would also be exempt from release reporting requirements under EPCRA section 313.

OTHER

- Q. If a quantity of a toxic chemical meets the criteria for a reporting exemption under EPCRA section 313, should it be included on the Form R report Part II, section 4.1: Maximum Amount of the Toxic Chemical On-Site at Any Time During The Calendar Year?
- A. No. If a Federal facility uses a toxic chemical in a manner that meets the criteria for a reporting exemption, that amount of the toxic chemical is exempt from threshold determinations and release reporting requirements. If a Form R report is required because of other, non-exempt uses, exempted quantities should not be included in calculations for Part II, section 4.1.
- Q. Do the reporting requirements of EPCRA section 313 overlook the possibility that a toxic chemical can lose its identity during a process that involves a chemical reaction? Is a release simply the difference between process “input and output” volumes?
- A. No. EPA recognizes that toxic chemicals may be consumed in a process. When some or all of a toxic chemical is consumed during a process, mass balance (i.e., the use of “inputs and outputs” to calculate releases) may not be a suitable method for facilities to estimate releases.

Facilities are encouraged to use available monitoring data, emissions factors, or engineering judgement (whichever is most appropriate) to calculate releases.

- Q. A Federal facility that produces electricity by burning coal stores the coal in an on-site stockpile that is exposed to the outside atmosphere. The facility meets one of the activity thresholds for filing a Form R report for benzene, a toxic chemical. Because the stockpiled coal contains benzene and is exposed to the outside atmosphere, must all the benzene in the coal be reported on the Form R report as an on-site release to land?
- A. No. A Federal facility does not have to report toxic chemicals contained in an on-site stockpile as an on-site release to land if the stored material is intended for processing or use. However, any quantity of toxic chemical that escapes to the air or remains in the soil from the stockpiled material (e.g., evaporative losses to air, material leached to the ground, etc.) must be reported as an on-site release to the environment. Also, once a Federal facility meets the criteria for filing a Form R report for a toxic chemical (such as benzene), all non-exempt releases of that chemical at the facility are to be included in the Form R report. (Note: Benzene is typically present in coal below the de minimis level and if this is the case, the quantity of benzene in coal is exempt from threshold determinations and release reporting under EPCRA section 313.)
- Q. Through natural migration, toxic chemicals released in prior years may shift between environmental media. How is the migration of a toxic chemical between environmental media considered for Form R reporting?
- A. Natural migration between environmental media of a toxic chemical previously released to the environment are not subject to the reporting requirements of EPCRA section 313. The initial release of the toxic chemical to the environment during the reporting year is reportable on the Form R. However, the natural migration of the chemical between environmental media in subsequent reporting years is not reportable. For example, seepage of a toxic chemical from a landfill to groundwater does not have to be reported under EPCRA section 313.
- Q. A Federal facility has a liquid waste stream containing a reportable toxic chemical that is incinerated on-site. The incineration is 99.9 percent efficient in destroying the reportable toxic chemical. The remaining 0.1 percent of the reportable toxic chemical is released to the air as a gaseous waste stream. Does the Federal facility also need to report this gaseous waste stream in the waste treatment section of the Form R report for the reportable toxic chemical?
- A. No. The Federal facility does not need to report the gaseous waste stream in Part II, section 7A of the Form R report, because no treatment is applied to the gaseous waste stream. However, any resulting air emissions would be reported as a release to air, and the amount of the release would be included in Part II, section 5.2, Stack or point air emissions. If the gaseous waste stream is then treated (e.g., by secondary combustion, filtration, or scrubbing), the stream would be listed as a gaseous waste stream and the treatment method(s) would be documented in Part II, section 7A, as a separate waste stream.
- Q. Section 313(g)(2) of EPCRA states that the owner or operator of a facility may use readily available data for reporting releases of toxic chemicals. If a Federal facility has

monitoring or emissions data for a toxic chemical that they do not believe are representative, should they still use that data to complete the release calculations on the Form R report?

- A. No. If a Federal facility has monitoring or emissions data that are not considered “representative,” the data should not be used. In such cases, a more accurate estimate based on mass balance calculations, published emission factors, engineering calculations, or best engineering judgement should be used. In such instances, a Federal facility should document why the available monitoring data were believed to be unrepresentative.
- Q. Tank trucks, barges, and rail cars enter a Federal facility. During loading, toxic chemicals are released. Are these releases subject to reporting requirements under EPCRA section 313?
- A. Yes. Under EPCRA section 313, a Federal agency is responsible for reporting releases of a toxic chemical (except fuel emissions specifically exempt) that occur during loading or unloading of a transportation vehicle while the vehicle is on property owned or operated by the Federal agency. The only releases that are exempt from these requirements are releases of a toxic chemical from a transportation vehicle that occur while the vehicle is still under “active shipping papers.”
- Q. A facility places drummed waste on-site with no immediate intent to transfer the waste off-site or dispose of it on-site. The facility has a RCRA Part B permit to operate as a Treatment, Storage, and Disposal Facility (TSDF). Does this facility have to report this placement of drummed waste as a release to land on-site on the Form R?
- A. Drummed wastes containing toxic chemicals that are placed on-site with no immediate intent to transfer the wastes offsite (e.g., no shipment is sent off-site during the reporting year) are to be reported in Part II, section 5.5.4 as on-site land disposal (as is explained in the Inside the Hotline: A Compilation of 1992 Monthly Hotline Reports document (EPA/530-R92-014M)), regardless of whether the facility has a RCRA Part B permit to operate as a TSDF.
- Q. A Federal facility discharges waste containing metals that are toxic chemicals to an on-site cooling pond. The metals settle and accumulate over time. Water from the pond eventually is drained, leaving behind a heavy metal sludge. The sludge is then dredged and sent off-site for disposal. How should toxic chemicals in the sludge be reported on the Form R?
- A. Toxic chemicals that are contained in sludge sent off-site for disposal should be reported as an off-site transfer in Part II, sections 6.2 and 8 of the Form R report.
- Q. Many Federal facilities send their hazardous waste containing toxic chemicals to off-site treatment, storage, and disposal facilities (TSDFs). If a Federal facility is reporting these toxic chemicals on a Form R report, what is the facility’s obligation to ascertain the final, known disposition of the toxic chemical for purposes of choosing a waste management code in Part II, section 6.2.C.?

- A. The Federal facility is required to use the best data available at the facility to identify the final, known disposition of a toxic chemical that it is reporting on a Form R report for the purpose of entering a waste management code in Part II, section 6.2.C of the Form R. While obtaining additional information from the off-site location concerning the fate of the particular toxic chemical is not required, it is certainly an option for facilities who lack a complete understanding of the final disposition of a toxic chemical in a waste sent off-site.
- Q. A Federal facility reporting under EPCRA section 313 discharges wastewater containing toxic chemicals to a Federally Owned Treatment Works (FOTW) facility. The FOTW is located on a separate site that is not contiguous or adjacent to the reporting facility. For purposes of Form R reporting, should releases to FOTWs be considered equivalent to discharges to Publicly Owned Treatment Works and reported in Part II, section 6.1, or should these releases be reported in Part II, section 6.2 as “wastewater treatment (excluding POTW)” (i.e., code M61)?
- A. If a Federal facility reporting under EPCRA section 313 discharges wastewater containing toxic chemicals to a Federally Owned Treatment Works (FOTW), the facility should report the discharge to the FOTW as a discharge to a POTW (Part II, section 6.1 of Form R), because the operations performed by the FOTW are essentially equivalent to those performed by a POTW.
- Q. A Federal facility acts as a waste broker for other facilities within its own agency, and the facility exceeds the reporting threshold for a toxic chemical. The facility receives the same toxic chemical from the other facilities for the purpose of off-site disposal. Should the Federal facility report the quantities of toxic chemicals in waste received and transferred off-site for disposal in section 8.8, because those quantities are not related to production processes at the facility during the reporting year?
- A. No. The quantity of toxic chemical in the facility’s offsite transfers of waste received from other facilities should not be reported in section 8.8, because the shipment of the waste is not the result of a remedial action, catastrophic event, or remedial event. The Federal facility should report this quantity in sections 8.1 and 6.2 of the Form R report.
- Q. Would clean-up of soil or groundwater contaminated from prior years’ activities involving a toxic chemical be included in remedial actions reported in Part II, section 8.8 of Form R?
- A. A toxic chemical contained in wastes generated as a result of a prior year’s activities that is undergoing remediation is reported in Part II, sections 5, 6, and 8.8 of Form R only if the Federal facility exceeds an activity threshold through some other activity involving the same toxic chemical. A toxic chemical being used to remediate wastes from prior year’s activities is considered “otherwise used.” If that use exceeds 10,000 pounds in the reporting year, all releases and off-site transfers of that same chemical are reported in Part II, sections 5, 6, and 8.1 - 8.7 of Form R.

- Q. Is an accidental release from filling an ammonia tank reportable in section 8.8 or 8.1 of the Form R report?
- A. If the accidental release of ammonia at a Federal facility is a one-time event, then it should be reported in section 8.8 of the Form R report. If the release is routine or frequent, it should be reported in section 8.1 of the Form R. For example, spills that occur as a routine part of production operations and could be reduced or eliminated by improved handling, loading, or unloading procedures are included in the quantities reported in section 8.1 through 8.7 of the Form R report, as appropriate. A total loss of containment resulting from a tank rupture caused by a tornado would be included in the quantity reported in section 8.8.
- Q. Federal facility is involved in the remediation of benzene. The facility also uses benzene as a manufacturing aid in the blending of fuel additives. The amount of benzene used in the fuel blending operations exceeds the 25,000-pound processing threshold under EPCRA section 313 and the facility has more than 10 full time employees. If benzene is released to the air during remediation, does that release get reported in Part II, section 8.1 of the Form R?
- A. No. All releases and off-site transfers of a toxic chemical resulting from remedial actions should be reported under Part II, section 8.8 (as well as in sections 5 and 6) of the Form R and are not to be reported under Part II, sections 8.1 through 8.7 of the Form R.
- Q. If a Federal agency operates a treatment plant as part of remediation of an environmental contaminant at a Federal facility, do contaminants already there, not being added, have to be included in calculating thresholds and releases?
- A. Such material is not included in section 313 threshold determinations as long as it is not being manufactured, processed, or used. If the Federal facility's uses of the same toxic chemical exceed the manufacture or process or otherwise use thresholds, then release or transfer reporting is required. For example, chemicals used in the treatment plant are considered otherwise used. In that event, a release does not include material already in a landfill, but does include any material released to the environment by remedial activity or transferred off-site.
- Q. A Federal facility is submitting a Form R report for a toxic chemical. During a remediation project, the same toxic chemical is transferred from one medium to another. For example, soil excavation during groundwater remediation causes a toxic chemical to be released to the air. How should the release be reported on the Form R?
- A. If a Federal facility is submitting a Form R report for a toxic chemical, release of that toxic chemical from one medium to another due to remediation activities must be reported on the Form R, unlike toxic chemicals that transfer medium as a result of natural migration. Releases of toxic chemicals that occur as a result remediation activities during the reporting year are reported in section 8.8 and the appropriate sections of Part II, sections 5 and 6 of the Form R report.

- Q. How should a Federal facility determine if a toxic chemical has a heating value high enough to sustain combustion for purposes of completing Part II, sections 7B, 8.4, and 8.5 of the Form R? Is the value of 5,000 BTUs per pound that has been established as a standard for other environmental programs considered a good indicator for TRI reporting under section 313?
- A. EPA has not established specific criteria for determining whether a specific listed chemical's heat of combustion is high enough to sustain combustion. Facilities, therefore, must make this determination using the best available information at the facility. The Toxic Chemical Release Inventory Reporting Form R and Instructions document (Appendix C, page C-6), however, provides examples of chemicals whose BTU values are not high enough to sustain combustion (e.g., metals, CFCs, and halons).
- Q. Who should sign the Form R for the Federal facility?
- A. The senior management officer responsible for the operation of the Federal facility should sign the certification statement on Form R. For military installations, the base commander should sign the Form R.
- Q. Commercial suppliers are not required to provide supplier notification to customers outside SIC codes 20-39 according to 40 CFR 372.45. What should Federal facilities whose operations fall outside of SIC codes 20-39 do to ensure that toxic chemicals listed under EPCRA section 313 are identified by their suppliers?
- A. Because supplier notification is not required of commercial suppliers to facilities outside of SIC codes 20-39, there currently is no regulatory mechanism to ensure that this information is received by the purchasing facility. One mechanism for ensuring that suppliers identify toxic chemicals present in mixtures and trade name products and provide concentration information is for the Federal facilities to request this type of information from their suppliers, revise existing contracts with suppliers to require this information, or ensure this information is required to be provided in any new contracts with suppliers.

MEMORANDUM FOR DISTRIBUTION 23 AUG 94

FROM: SAF/AQ
1060 Air Force Pentagon
Washington DC 20330-1060

SUBJECT: Pollution Prevention on Air Force Acquisition Programs

References: (a) DoDI 5000.2, Defense Acquisition Management Policies and Procedures,
23 Feb 91

(b) CSAF/SECAF Action Memorandum, Air Force Pollution Prevention Program,
7 Jan 93

(c) CSAF/SECAF Action Memorandum, Air Force Ban on Purchase of Ozone
Depleting Chemicals (ODCs), 7 Jan 93

(d) AF Supplement 1, DoDI 5000.2, Feb 93 (Draft)

(e) USAF/CVA Letter, Air Force Ozone Depleting Chemical (ODC) Interim
Waiver Application, Approval Procedures, and Reporting Requirements,
14 Jul 93

(f) Executive Order 12856, Federal Compliance With Right-to-Know Laws and
Pollution Prevention Requirements, 3 Aug 93

This policy memo supersedes AQ Policy Memo 93M-011.

The Chief of Staff and the Secretary of the Air Force cosigned two landmark environmental policies concerning pollution prevention and Ozone Depleting Chemicals (ODCs) on 7 Jan 93. On 3 Aug 93 President Clinton signed Executive Order 12856 that requires all Federal Agencies to have pollution prevention programs working to significantly reduce the use of hazardous materials. For Acquisition Programs, these documents reinforce the existing requirements described in DoDI (and AF Sup 1) 5000.2, Part 6, Section I, "System Safety, Health Hazards, and Environmental Impact." These policies and instructions apply to all acquisition programs and can significantly improve health, safety, and survivability. Program Executive Officers (PEOs), Designated Acquisition Commanders (DACs), Single Managers (SMs), and the entire acquisition community shall implement these policies in accordance with the following guidance and with the full support and assistance of Headquarters Air Force Materiel Command (HQ AFMC). Program Management Directives shall be amended at the next opportunity. The funds for implementation must come from the normal budgeting process, and will require program

restructuring to accomplish this task within existing program budgets. Essentially, Acquisition Pollution Prevention (APP) consists of no more, and no less, than fully integrating the policies and procedures from DoDI 5000.2 into the systems engineering decision process and focusing management attention on this area to ensure innovative, cost-effective approaches are taken in implementing the results.

HQ AFMC will coordinate support to the SMs in implementing this policy. With the assistance and support of HQ AFMC, SMs will work with their customers and the Logistics communities to identify and minimize the use of ODCs and hazardous materials (HAZMAT), implement required changes to Technical Orders (TOs) and MILSPECs, and make the necessary investments to physically implement the changes in the support and operation of their systems. When multiple SMs identify projects (e.g. R&D, test and evaluation) that could be combined to resolve a common pollution source, HQ AFMC will coordinate the use of AFMC resources in support of those projects.

Pollution prevention's primary goal is to reduce ODC and HAZMAT use and release into the environment to as near zero as feasible.

- a. All SMs will track the elimination of Class I ODCs using the metric at Attachment 1. SMs shall also identify and track HAZMAT reduction using the metric at Attachment 2 that focuses on the Environmental Protection Agency's list of 17 industrial toxins (EPA 17).
- b. SMs must assess all alternative materials and processes to ensure they are not more hazardous than the Class I ODCs or the EPA 17 substances being replaced. SMs shall select alternatives that incur the lowest cost required to protect human health and the environment over the life cycle of their system (DoDD 4210.15).
- c. In addition, for systems still in development, SMs shall assess all chemicals and materials in terms of program trade-off decisions and life cycle cost impact. This allows hazardous materials trade-offs to take a logical place in the overall weapon system design and development, thereby balancing pollution prevention and support characteristics. For new systems each milestone review shall contain an evaluation of hazardous materials and documentation of the program manager's decision in accordance with Air Force Supplement 1 to DoDI 5000.2, Part 6, Section I.

Class I ODCs are a critical subset of pollution prevention. Environmental laws and the worldwide end of chlorofluorocarbon (CFC) production by 1995 have the potential to adversely impact our mission if SMs do not develop and implement effective environmental programs.

a. The FY93 National Defense Authorization Act, PL 102-484, Section 326, prohibits the award of any new contracts, as well as the issuance of certain modifications, extensions, and amendments to existing contracts, after 1 Jun 93 if the contract contains a specification or standard that requires, or can only be satisfied by, the use of Class I ODCs unless use of the chemical is approved by a senior acquisition official. In these cases, SMs must review their contracts to determine Class I ODC requirements. An adequate review consists of investigation through the appropriate tier of documentation stipulated in DoDI 5000.2, Part 10, Section C, paragraph 3b, unless engineering expertise or judgment dictates further review.

b. Although the Air Force goal is to eliminate use of Class I ODCs, this may not be possible in the short term if we are to meet mission requirements. In those critical cases where substitutions are not feasible (technically, economically, or legally), SMs can apply for waiver approval to contract for continued use or purchase of Class I ODCs in accordance with the procedures contained in the 14 Jul 93 USAF/CVA letter. The waiver approval only serves as a transitional measure until the use of Class I ODCs can be eliminated. The waiver applications must include the specifics (milestones, schedules, and funding) of the SM's plan to find and implement a suitable substitute.

c. SMs must work aggressively toward meeting the 1 Apr 94 CSAF goal to revise all TOs to allow the use of non-Class I ODC alternatives. If this date is not achievable, notify SAF/AQX by 1 Apr 94 with the reason why it cannot be met and a plan of action to meet the requirement. This plan should include all waivers necessary for the system until the TOs are revised. SMs shall use the metric at Attachment 3 to document their progress.

d. In accordance with the 14 Jul 93 USAF/CVA letter, HQ AFMC/EN is the Air Force ODC Waiver Focal Point (WFP) to assist SMs with elimination efforts. This focal point is empowered to cross-feed waiver information and technical alternatives and identify R&D technology needs to the HQ AFMC/ST Technology Master Plan Process to ensure that top priorities are addressed. Assistance is available through the ODC help line operated/recorded 24 hours per day at DSN 787-2229, ext 117.

Each SM must have a strategy and funding plan for minimizing hazardous materials and Class I ODCs in the program. SMs should have these funding plans in place no later than May 94 for inclusion in the next POM cycle.

a. The emphasis is to implement a pollution prevention program that would reduce life cycle costs of systems through reduced operation and maintenance costs and avoidance of corrective measures downstream. To help document this and to assist in the decision making process, SMs must compare the life cycle costs of continued use of HAZMAT and ODCs to the life cycle costs of finding and implementing replacements.

b. SAF/AQ, working with HQ AFMC and SM representatives, has developed an overall strategy to coordinate the SMs' efforts to reduce implementation costs. HQ AFMC has the lead in organizing and implementing this strategy. The strategy will involve SMs working with other SMs, contractors, and military services to solve shared or similar problems and avoid parallel efforts. This will require identifying shared problems and developing innovative solutions by utilizing horizontal engineering and teaming with contractors and industry associations. SMs also need to look at AF industrial operations on a plant basis so common needs can be aggregated.

c. SMs will need to work with their operational customers using risk management to trade off cost, schedule, and performance requirements to reduce the use of hazardous materials to as near zero as feasible, technically and economically. As part of this, SMs must include in their systems engineering functions the Environmental Impact Analysis Process (EIAP) and System Safety Programs (SSP), that already address pollution prevention issues. SMs are already responsible for complying with the EIAP and SSP requirements. However, SMs must ensure they fully integrate the EIAP and SSP into the ongoing systems engineering management decision making processes. To facilitate this, SMs must prepare their own Environmental Impact Assessments/Statements, with assistance from the Center Environmental, Safety, and Health staffs.

The Air Force is committed to environmental leadership. By fully implementing the policies and procedures within DoDI 5000.2, Part 6, Section I, and the Air Force Supplement 1, SMs can contribute to this goal. To clearly show progress in pollution prevention, the attached metrics shall be briefed at each Weapon System Program Assessment Review. In addition, each program shall provide HQ AFMC semiannual progress reports in March and September, starting March 94, consisting of the attached metrics. HQ AFMC will consolidate the inputs into roll-up metrics and provide those to SAF/AQ. SAF/AQ will use the roll-up metrics to track Air Force wide progress for all weapon systems. If all data are not available for the March 94 report, the report shall consist of available data with a plan for obtaining the metric information. Subsequent reports shall also include a brief narrative describing the changes from the previous report.

The OPR for this memorandum is SAF/AQXM, DSN 227-5023.

Attachments:

1. Distribution (*not included*)
2. Metric: Class I ODC Use (*not included*)
3. Metric: EPA 17 Industrial Toxins Use (*not included*)
4. Metric: TOs with Class I ODC Requirements (*not included*)

DEPARTMENT OF THE AIR FORCE
OFFICE OF THE CHIEF OF STAFF
UNITED STATES AIR FORCE
WASHINGTON DC 20330

FROM: HQ USAF/CVA
1670 Air Force Pentagon
Washington, DC 20330-1670

SUBJ: Air Force Ozone Depleting Chemical (ODC) Interim Waiver Application, Approval
Procedures, and Reporting Requirements

TO: ALMAJCOM/CV/CE/LG/PK/JA HQ USAF/RE NGB/CF

14 JUL 1993

1. The attached interim Ozone Depleting Chemical (ODC) waiver application and approval procedures fulfill the requirements set forth in the National Defense Authorization Act for FY 1993, the Department of Defense ODC Procurement Guidance, and Air Force ODC policy. Effective 1 Jun 93, waivers are required prior to award of any contract that requires the use of a Class I ODC, to purchase new or recycled ODCs, or obtain ODCs from the Defense Logistics Agency ODC bank for mission critical applications. Waivers permitted under these procedures are for the purpose of granting time to develop and implement ODC alternatives, and not to allow "business as usual." Waivers are not required for Government use of ODCs currently in stock on Air Force facilities; however, waivers will be required to purchase replacement stock locally or draw replacement stock from the ODC bank. These procedures will also be outlined in the forthcoming Air Force Instruction 32-7080, Pollution Prevention Programs.

2. ODC availability will be greatly reduced by the end of 1994 when the largest United States producer stops production and will disappear by 1995 when the remaining production ends. If your program/mission is dependent upon a continued supply of ODCs after this date, it is in jeopardy. It is important to find alternatives to ODCs to avoid mission impact when ODCs are no longer available and to minimize the depletion of the Earth's ozone layer. Any questions regarding the implementation of this portion of the Air Force's ODC policy should be addressed to Air Staff representative for your functional area. Please ensure widest possible distribution of these procedures.

THOMAS G. McInerney
Lt General, USAF
Assistant Vice Chief of Staff

1 Atch
(AF ODC Waiver Application)
Approval Procedures, and Reporting
Requirements (Interim) w/4 Atch

cc: HQ USAF Distribution C

United States Air Force
Ozone Depleting Chemicals (ODCs)

*Waiver Application,
Approval Procedures, and
Reporting Requirements
(Interim)*

TABLE OF CONTENTS

PAGE #

| | |
|---|-----|
| 1. TERMS AND DEFINITIONS | 2-4 |
| 2. BACKGROUND..... | 5-7 |
| 3. AF ODC WAIVER APPLICATION (Interim) | 8-9 |
| 4. ODC WAIVER PROCESS FOR WEAPON SYSTEMS | 10 |
| 5. ODC WAIVER PROCESS FOR NON-WEAPON SYSTEM | 11 |
| 6. ODC REPORTING REQUIREMENTS | 12 |

ATTACHMENTS

1. National Defense Authorization Act for FY 1993 (Sec. 325 & 326)
2. Department of Defense ODC Policy, 20 May 93
3. Air Force ODC Policy, 7 Jan 93
4. AFAC 92-29, 26 May 93

TERMS AND DEFINITIONS

1. **Appropriate Technical Representative (ATR)** - The approved representative of the Waiver Approval Authority. The ATR is HQ AFMC/EN or their designated representative (outside the Single Manager chain of command) for all Air Force applications. By law, the ATR is a government official assigned responsibility for performing an independent technical review of the ODC requirement by considering available options for substituting chemicals or alternate technology. The ATR signs the Certification Statement in the waiver application.

2. **Waiver Approval Authority (WAA)** - This official has the authority to approve waivers to allow the purchase or use of ODCs. The three WAAs for these interim procedures are SAF/AQ, AF/LG and AF/CE.

3. **ODC Waiver Focal Point (WFP)**. The WFP (AFMC/EN) has three responsibilities:

- a. **Central Repository** - Maintaining information on waivers and producing ODC waiver reports as required by law and DoD/AF policy.
- b. **Technical Information Exchange** - Crossfeed waiver information and technical alternatives, and identify R&D Technology needs to the AFMC/ST Master Process.
- c. **Appropriate Technical Representative (ATR)** - Perform the independent technical review as requested.

4. **Certification Statement** - The certification is a statement that a suitable substitute for the Class I ODC is not currently available. This is required for waiver applications on defense contracts or interagency agreements such as procurement from DLA (see Waiver Application).

5. **Suitable Substitute** - An alternative to ODC use through elimination, process modification or material substitution that is technically, economically and legally feasible.

6. **Statement of no ODC requirement** - In accordance with AFFARS 5310.002-71(90)(c), the requiring activity must furnish either a written statement that the Air Force does not require the contractor to deliver or use Class I ODCs in the performance of the contract or an approved waiver to the contracting officer. Although the Air Force policy is to discourage the use of Class I ODCs, the contractor may elect to use an ODC. If the user did not specify that an ODC must be used, has not phrased the requirement in such a way that it can only be met through the use of a Class I ODC, or did not require the contractor to deliver a separately identifiable Class I ODC under the contract, the user complies with Air Force policy. If the using activity provides a statement of no ODC requirement to the contracting officer, then a waiver is not needed.

The definition of "require" the contractor to deliver or use Class I ODCs in the performance of the contract is: compel the contractor to use a Class I ODC by (1) placing a specification, standard, or technical order that requires the use of an ODC in a process or service on contract as a compliance

document, or (2) stating the requirement in such a way that the contractor can only satisfy it through the use of a Class I ODC.

TERMS AND DEFINITIONS (continued)

A waiver may not be required for some off-the-shelf consumable materials, even if they include Class I ODCs in their formulation. These items were developed and are used commercially. They were not developed from military specifications, but may be used for military applications and therefore meet the test that the requesting agency did not require the use of ODCs in the product. This is consistent with the Administration's policy of relying on commercial specifications. An example of this type of product is hand soap, which may contain a Class I ODC as part of its formula.

ODC containing products will be reformulated by producers as the ODCs are phased out of production in accordance with the provisions of the Montreal Protocol. If the requesting agency has not specified the use of a particular ODC, will accept a non-ODC formulation, and has not required the delivery of a separately identifiable Class I ODC, then the requesting agency may sign the statement of no ODC requirement.

The written statement of no ODC requirement is as follows:

"I have reviewed the requirement, including available technical documentation, and believe that it does not require the contractor to use Class I Ozone Depleting Chemicals (ODCs) in performance of the contract, nor does it require delivery of a separately identifiable Class I ODC as an item of supply or as a part of any service."

7. Ozone Depleting Chemicals (ODC) and Ozone Depleting Substances (ODS) - These terms are used interchangeably. A list of Class I ODCs is provided in the Air Force ODC policy.

8. Class Waivers - Interim waiver approval from SAF/AQ, AF/LG or AF/CE to procure specific ODCs for MAJCOM or Air Force wide applications, which have potential for immediate mission or health and safety impact. This will minimize the volume of waiver requests and allow waiver requesters additional time to review alternatives. A Class waiver will allow the purchase of specific materials, services or equipment involving applications where transition to alternative materials or technologies have not been completed. Some examples of areas where approval will be considered are solvent cleaning of electronics or precision equipment, medical supplies/services, laboratory uses for the purpose of validating performance of ODC alternatives, or refrigeration service contracts. Requesters must be able to provide detailed plans as described in the waiver application instructions to include dates when ODCs will no longer be required.

9. Evaluation Process - Statute requires review of the requirements on contracts awarded before 1 Jun 93 after issuance of a qualifying modification to the contract. The evaluation process is considered complete when the contract requirement has been reviewed and: 1) it has been determined that the contractor is not required to use or deliver a separately identifiable ODC, 2) a completed waiver application has been

submitted in accordance with this policy, or 3) the requiring activity has initiated action to remove the Class I ODC requirement(s) from the contract.

BACKGROUND

INTRODUCTION

The production phase out for ozone depleting chemicals is imminent. Although waivers may be granted to continue obtaining ODCs until the phase out, 42 U.S.C. section 7671c(f) provides that waivers for production beyond the mandated production phase-out dates of certain Class I ODCs can be granted only by the President, to the extent such action is consistent with the Montreal Protocol Effective January 1, 1994 Halon production will cease and January 1, 1996 Chlorofluorocarbon production will cease. Our dependence on these chemicals must be eliminated or missions dependent on a continued supply of these substances might be jeopardized.

To fulfill the requirements outlined in laws and polices identified below, a need existed for the development of waiver application, approval procedures, and reporting requirements for ODCs. These interim ODC procedures were created by Air Staff and HQ AFMC environmental, logistics, and acquisition representatives.

1. On November 15, 1990 the Clean Air Act Amendments were signed into law. Title VI of the Amendments implemented the 1990 revised Montreal Protocol and established venting restrictions, training and certification requirements, phase out of certain non essential uses, labeling requirements, production restriction and requirements for requesting production exemptions.
2. Major results of the Copenhagen-amended Montreal Protocol (1992) included an accelerated production phase out schedule with production to cease for:
 - Halon by 1 January 1994
 - CFCs, Carbon Tetrachloride, and Methyl Chloroform by 1 January 1996.
3. On August 11, 1992, the Under Secretary of Defense directed the Defense Logistics Agency to establish and manage a Defense Reserve of ODCs to ensure that supplies for mission critical uses are available.
4. National Defense Authorization Act for FY 1993 (Public Law 102-484) established legal requirements that must be met prior to the award of any contract. Section 326 of this law is the driving force behind why all contracts awarded after 1 Jun 93 which call for the use of or depend on the use of ODCs require an approved waiver. The Act also established reporting and banking requirements. An excerpt of Section 325 & 326 of P.L. 102-484 is attached (atch 1).
5. On January 7, 1993 the Secretary of the Air Force and the Chief of Staff of the Air Force co-signed the Air Force Policy on Ozone Depleting Chemicals (ODCs). The Air Force policy incorporated all the laws and policies prior to this date and outlined an aggressive approach to eliminating the AF's dependence on ODCs. The AF ODC policy is shown at attachment 3).

6. On 20 May 1993, the Under Secretary of Defense (Acquisition) established Department of Defense Policy on Ozone Depleting Chemicals. This memorandum implemented the requirements set forth in the National Defense Authorization Act for FY 1993. The DoD policy established more detailed reporting requirements than P.L. 102-484 and allows the Services to designate approval authority ". . . at a level no lower than a general or flag officer or Senior Executive Service member of the requiring activity." (NOTE: The interim Air Force waiver procedures require that this approval authority remain at Secretariat/Air Staff level.). The DoD policy is shown at attachment 2.

7. On 26 May 1993 the Air Force Deputy Assistant Secretary (Contracting) forwarded to the field for action the interim Air Force Contracting Policy for Elimination of Class I Ozone Depleting Substances. This document included the AFFARS language needed to implement Section 326 of the FY 93 National Defense Authorization Act and asks that the requiring activity provide an approved waiver or a statement of ODC non-use to the contracting officer for ALL contracts awarded after 1 Jun 93. AFAC 92-29 is shown attachment 4.

WAIVER POLICY PROCEDURES

No contract may be awarded that requires the contractor to use a Class I ODC during contract performance, that contains a requirement that can only be met through the use of Class I ODCs, or that requires delivery of a separately identifiable Class I ODC without an approved waiver from SAF/AQ, AF/LG, or AF/CE, as appropriate. Waivers are for the purpose of awarding contracts when a suitable substitute is not currently available. Waivers are not to allow "business as usual". Waivers are not required for government use of ODCs currently in Air Force stock, or when no future requirement to purchase ODCs exists. Waivers are required to obtain ODCs from the Defense Logistics Agency ODC bank for mission critical applications. This waiver package considers all the current laws and policies governing ODCs. Use the attached interim procedures for waiver requests until final procedures are established.

If it is determined that the contract does NOT require the use of a Class I ODC, then in accordance with AFFARS 5310.002-71(90)(c), the requiring activity must furnish a written statement to the contracting officer. This statement of ODC non-use must declare that the Air Force does not require the contractor to deliver a separately identifiable Class I ODC or use Class I ODCs in the performance of the contract. The written statement is shown in the TERMS and DEFINITIONS Section of these interim procedures.

If it is determined that a waiver is needed, then an AF ODC Waiver Application must be completed by the originating office. Once the application is completed, the process covered in this package must be followed to separately procure ODCs and to obtain ODCs from the DLA bank.

Because of the potential volume of waivers that could be submitted as a result of the National Defense Authorization Act for FY 1993, the Air Force will approve for a short period, class waivers. The purpose of class waivers is to address immediate requirements to award contracts in areas where MAJCOM or Air Force-wide needs exist or potential for immediate impact to aircraft missions or personnel are possible.

Waiver requests shall be submitted by organizations designated by AF/CE, AF/LG, or SAF/AQ as the OPR for determining needs. Approval will be contingent upon information provided in the waiver application which demonstrates an aggressive attempt to find and implement alternatives to the use of ODCs.

Waivers to procure ODCs through contracts or from the DLA bank for supporting weapon systems and non-weapon systems will be submitted in accordance with the attached procedures for waiver applications. If approved, the waiver will be returned to the originating office with copies to the central repository.

AF ODC WAIVER APPLICATION
(Interim)

WAIVER REQUEST # : ____/____(Base or Center Name/Waiver # Starting with 00001)

DATE OF REQUEST: _____

- 1) Program (system or operation) requiring ODC.
 - a. For existing contracts, provide the DoD contract number and the contractor's name.
- 2) Name of ODC (1 ODC per waiver application).
- 3) Provide the estimated amount of class I ODC to be used. List separately the estimated amount required for the contract or maintenance and operation for each year this waiver is requested. (This is the total ODC required less the amount recycled in-house from this operation annually.)
- 4) Is the continued use of the ODC mission critical to the Air Force (Check one)?

___Mission Critical___Non-Mission Critical

- 5) Explain the purpose of the waiver (i.e., to award a contract that requires the use of a class I ODC, to purchase ODCs, or obtain from Defense Logistics Agency ODC bank for mission critical applications).
- 6) The time period for which this waiver is requested (Not to exceed 31 Dec 94).
- 7) Describe the specific use of the ODC (Material NSN, T.O./MILSPEC/MILSTD, Process Use, etc.).
- 8) Discuss ODC alternatives considered and explain why they are technically, economically or legally unacceptable. List the technical, economic or legal experts consulted. The discussion could include a technical and economic comparison between the continued use of the ODC and use of a substitute chemical or process.
- 9) Describe the actions taken to reduce the use or loss of ODCs such as, recycling or procedure/process change.
- 10) Describe future actions planned to develop, evaluate, and implement non-ODC alternatives and the programming & budgeting efforts taken for these non-ODC alternatives. Include milestone dates and an estimate of when ODCs will no longer be required.
- 11) If the ODC waiver is approved, what source can supply the ODC requirement?

- 12) If the ODC waiver is disapproved, what is the alternate plan of action?

AF ODC WAIVER APPLICATION continued

(Interim)

- 13) FOREIGN MILITARY SALES ONLY: The unique nature of FMS contracts requires additional questions. These are:
- a. Have the FMS customers been made aware that the system includes ODCs which are being phased out under the Montreal Protocol?
 - b. What arrangements have been made to ensure availability of the ODC for the expected life cycle of the system? Explain what commitments, if any, the USAF will have to support the system.
 - c. Will the FMS customers pay for the redesign to eliminate the use of Class I ODCs in the manufacturing, maintenance and operation of the system?
 - d. Is it feasible to deliver the system without the ODC and have the FMS customer supply the ODC upon receipt?
 - e. Is the FMS customer willing to supply the ODC requirement for production?
- 14) Signature Block of the requesting official. Include the name, office symbol, address, telephone number, organization and command.
- 15) Sample Certification Statements - The ATR shall sign a certification statement similar to one of the following samples:

"As an appropriate technical representative, I have reviewed the requirement and certify, to the best of my knowledge and belief, that a suitable technical alternative for replacing the Class I ozone depleting chemical is not currently available".

"As an appropriate technical representative, I have reviewed the requirement and certify, to the best of my knowledge and belief, that a technical substitute is available for replacing the Class I ozone depleting chemical but that it is the position of the requesting official that the substitute is not currently economically feasible."

ODC WAIVER PROCESS
FOR WEAPON SYSTEMS (Interim)

STEP 1. The Single Manager (SM) responsible for the system or sub-system identifies the need for a waiver. The SM, with assistance of the Center Environmental Office and AFMC/EN, fills out the waiver application. The SM responsible for a weapon system should combine, if possible, all the waiver applications for that weapon system and forward the applications in one consolidated package (NOTE: Only one ODC per application). Examples are:

- a) operational weapon systems or subsystems where ODC use is required by the technical orders (e.g. Halon 1301 for F-16 fuel cell inerting),
- b) new production or modification contracts where specifications require ODCs, or can be met only through the use of ODCs (e.g. CFC-113 to clean fuel cell control relays on the F-16),
- c) test systems, Aerospace Ground Equipment (AGE), support equipment, etc. which require ODCs (CFC-12 for AGE equipment).

STEP 2. The Center Environmental Office (e.g. ASC/EM) or the equivalent supports the development of the waiver request. This office is responsible for:

- a) reviewing the waiver for format and accuracy,
- b) assigning a waiver request number (Center Name/waiver number starting with 0001).

STEP 3. The Single Manager signs and forwards the waiver request to the ATR.

STEP 4. The ATR, AFMC/EN or their designated representative (outside the Single Manager chain of command), reviews the application and recommends approval or disapproval. The ATR signs the certification statement, returns the application to the Single Manager for forwarding to the Program Executive Officer (PEO) or Designated Acquisition Commander (DAC).

STEP 5. The PEO or DAC reviews the waiver request and if it concurs, the request is endorsed and forwarded to SAF/AQ. Waiver requests should be mailed to:

SAF/AQXM (EPC Pollution Prevention Subcommittee)
1060 Air Force Pentagon
Washington DC 20330-1060
Facsimile Number DSN 227-4936

STEP 6. The waiver request is approved/disapproved by the appropriate Waiver Approval Authority and is returned to the originating office with copies to the PEO or DAC and the central repository.

ODC WAIVER PROCESS
FOR NON-WEAPON SYSTEM
(Interim)

STEP 1. The office responsible for facilities or non-weapon system specific requirement identifies the need for a waiver. This office, with assistance of the Base Environmental Office, fills out the waiver application.

STEP 2. The Base Environmental Office or the equivalent supports the development of the waiver request. This office is responsible for:

- a) reviewing the waiver for format and accuracy,
- b) assigning a waiver request number (Center Name/waiver number starting with 0001).

STEP 3. The installation commander signs and forwards the waiver request to the appropriate MAJCOM office (MAJCOM/CE or MAJCOM/LG).

STEP 4. The MAJCOM reviews the waiver request and if it concurs, the request is routed to AFMC/EN.

STEP 5. The ATR, AFMC/EN or their designated representative, reviews the application and recommends approval or disapproval. For approved waivers, the ATR signs the certification statement and returns it to the MAJCOM.

STEP 6. The MAJCOM forwards the application to the Air Staff. When possible, the MAJCOMs should combine waiver applications and forward the waiver applications in one consolidated package to HQ USAF. The HQ USAF mailing address for waiver requests is:

SAF/AQXM (EPC Pollution Prevention Subcommittee)
1060 Air Force Pentagon
Washington DC 20330-1060
Facsimile Number DSN 227-4936

STEP 7. The waiver request is approved/disapproved by the appropriate Waiver Approval Authority and is returned to the originating office with copies to the MAJCOM and the central repository

ODC REPORTING REQUIREMENTS

REPORTING

The Central Repository, AFMC/EN, shall prepare and provide the Air Force's ODC reports on approved waivers, and determinations [see paragraphs (2)(B) and (4) of Section 326 of the National Defense Authorization Act for FY 93]. These reports will be coordinated through the waiver approval authorities by SAF/AQXM and submitted to SAF/MIQ for final Air Force approval. SAF/MIQ shall provide these reports to the Deputy Under Secretary of Defense (Environmental Security). DoD has the requirement under Section 326 to submit the reports to the Committees on Armed Services of the Senate and House of Representatives. The reports shall be transmitted in classified and unclassified forms. The reports will contain the following:

a. FOR NEW CONTRACTS

- (1) the program for each case in which Class I ODC use is approved;
- (2) the Class I ODC specified for the case; and
- (3) the estimated amount of Class I ODC to be used under each case.

b. FOR EXISTING CONTRACTS

- (1) The contractor's name and the number of each contract evaluated where economically feasible chemicals or alternative technologies are available.
 - (a) substance used in each substitution or alternative technology selected,
 - (b) estimated amount of Class I ODC saved over the life of the contract by each substitution or alternative technology,
 - (c) programs for which Class I ODC were procured or used.
- (2) The contractor's name and the number of each contract evaluated where economically feasible substance or alternative technology were not available.
 - (a) the Class I ODC used for each application under the contract,
 - (b) substitutes evaluated for each application under the contract,
 - (c) estimated amount of Class I ODC used for each application under the contract.

REPORTING FREQUENCY

Reports are due 30 days after the end of each quarter with the first report due July 30, 1993, for the month of June 1993, then continuing quarterly through the end of the calendar year 1995. Beginning in 1996 and continuing through the year 2000, reports will be submitted on an annual basis and are due by January 30 each year.

SECRETARY OF THE AIR FORCE
WASHINGTON

MEMORANDUM FOR ALMAJCOM/CC and DISTRIBUTION C

SUBJECT: Air Force Ban on Purchases of Ozone Depleting Chemicals
(ODCs) -- ACTION MEMORANDUM

Jan 7 1993

This policy implements the National Defense Authorization Act for Fiscal Year 1993, Title III, Section 326 (Public Law 102-484), and the Under Secretary of Defense (Acquisition) August 11, 1992 policy on ODCs. Effective January 1, 1993 we are instituting the attached Air Force policy governing the purchase, use, and management of controlled ODCs. This policy applies to all Air Force, Reserve, Air National Guard and Government Owned Contractor Operated activities.

We are taking this action for several reasons. Recent scientific data shows the earth's ozone layer is being destroyed far more rapidly than we previously believed, and for the first time, ODCs in the atmosphere threaten to deplete the ozone layer over populated areas of the world. Last month, the United Nations agreed to end chlorofluorocarbon (CFC) production by 1995*, and halon production by 1994 at the Montreal Protocol renegotiations. This will result in a global ODC production ban. Additionally, declining market demand will likely create supply problems before the production phaseout date, jeopardizing missions dependent on a continued supply of these substances.

This is a challenging task, but we expect each of you to take whatever steps are necessary. The production phaseout is imminent. The sooner we learn to live without these substances, the less likely we are to suffer a mission stoppage because they are not available, and the less we will contribute to the depletion of the earth's ozone layer.

Merrill A. McPeak, General, USAF
Chief of Staff

Donald B. Rice
Secretary of the Air Force

Attachment
Air Force ODC Policy

*End of calendar year

AIR FORCE POLICY ON OZONE DEPLETING CHEMICALS (ODCs)

This policy applies to all Air Force, Reserve, Air National Guard, and Government Owned Contractor Operated (GOCO) activities, and equipment, systems and products acquired by contract

Applicable Air Force Policy Directives and Instructions will be revised to incorporate this policy.

Waivers permitted under this policy are for the purpose of extending the time to develop and implement mission critical ODC alternatives, and not to allow "business as usual." Waivers shall not be required for ODCs currently in use, provided an alternative has been identified, and that no future requirement to purchase new ODCs exists. Waivers shall be required to purchase new ODCs, or obtain ODCs from the Defense Logistics Agency ODC bank for mission critical applications.

This policy is effective January 1, 1993, and includes the following ODCs:

HALONS:

Halon 1211, Halon 1301, Halon 1202 and Halon 1011 are used primarily as firefighting agents. Halon 2402 is used for vector control in some missile systems.

CHLOROFLUOROCARBONS (CFCs);

CFCs-11, -12, -113, -114, -115, -13, -111, -112, -211, -212, -213, -214, -215, -216, and -217. These are used primarily as refrigerants and cleaning solvents.

ÄOTHER CONTROLLED SUBSTANCES:

Carbon Tetrachloride and Methyl Chloroform, which are used primarily as cleaning solvents.

Methyl Bromide, which is used as a pesticide and fumigant.

DEFENSE LOGISTICS AGENCY ODC "BANK"

The Air Force endorses the practice of recycling ODCs through an ODC bank to meet mission critical applications, until non-ODC alternatives can be identified and implemented. The DLA is establishing a DoD ODC bank to ensure that supplies for mission critical uses are available to the Services. AF/CE shall develop guidance for AF participation in the DLA ODC bank.

HALON POLICY

HALON USE AND PURCHASE POLICY

- The purchase of newly produced halons is prohibited as of June 1, 1993, unless a waiver is approved. Halon needed to meet mission critical applications will be recycled from existing stocks, such as the DLA ODC bank.
- Mission critical halon applications are defined as halons used on board aircraft which are required to meet flight safety, flight survivability, or flight certification requirements.

Airborne Systems and Subsystems

- SAF/AQ shall require aircraft in development (pre Milestone III) not be designed to include halon, but shall incorporate alternatives currently under development. SAF/AQT shall develop non-halon systems for aircraft, in coordination with other Federal Agencies and the private sector.
- Halons needed to meet mission critical applications will be obtained by using existing stocks, or from the DLA ODC bank in the event the DLA ODC bank is unable to meet requirements, recycled halons may be purchased from commercial sources.
- Existing aircraft halon systems which discharge to the atmosphere for other than actual fire situations, such as fuel tank inerting systems, shall be used only in actual combat, or for actual in-flight emergencies. SAF/AQ and AF/LG shall evaluate halon alternatives for these systems, and shall direct program offices responsible for aircraft using these systems to implement alternatives, once available.
- Correcting fire warning systems and operational procedures that result in false alarms and false discharges shall be a top priority of system managers.

Halon on Flightlines

- Halon systems on crash/rescue vehicles shall be disabled. AF/CE shall implement a phased program to replace these systems with ones containing non-halon fire fighting agents.
- AF/LG, AF/CE and SAF/MIQ shall jointly select a halon alternative for the 1501b flightline extinguishers and shall implement a phased replacement program. Halon removed from crash/rescue vehicles, or from existing installation stock, may be used to service flightline extinguishers until the phased replacement program is complete, without need for a waiver. Flightline extinguishers shall be serviced using recycling equipment. The recycled halon shall be used to reservice the halon extinguishers remaining in the inventory until the phased

transition is complete. Halon remaining after the transition is complete shall be added to the AF account of the DLA ODC bank.

Halon in Facilities

- Purchasing halon extinguishers for facility applications is prohibited. Existing extinguishers may be retained and replaced through attrition, without need for a waiver. Halon removed from facility portable extinguishers may be used to service flightline extinguishers until the phased replacement of the flightline halon extinguishers is complete. Once complete, excess halon shall be added to the AF account of the DLA ODC bank.
- Total flooding systems shall not be specified or purchased. Automatic discharge mechanisms shall be disabled and systems shall be placed on manual activation in order to reduce accidental halon loss to the atmosphere. Existing systems do not require waivers, but shall be replaced with non-halon alternatives through attrition, as facilities are renovated, modified, or removed from service.

HALON BANKING STRATEGY

- SAF/AQ shall identify total annual halon required to meet mission critical applications, by quantity, type and application for SAF/AQ managed systems until the halon requirement no longer exists. AF/LG shall identify same requirements for AF/LG managed systems. AF/CE shall consolidate Air Force total requirements and submit to SAF/MIQ. SAF/MI shall forward Air Force requirements to DLA for their use in managing the DoD ODC bank. The requirements shall consist of the total halon required to make up for de minimis losses during recycling, plus an amount required for actual firefighting, plus a minimum amount for accidental loss.
- Air Force halon shall be managed according to the following:
- AF/LG shall direct that halon be removed from aircraft being retired from service and be redeployed or added to the AF account of the DLA ODC bank.
- AF/LG shall direct that all servicing of aircraft halon systems capture the halon for recycling. No atmospheric discharge during servicing, other than de minimis, is permitted. Halon captured by field servicing organizations shall be recycled for reuse either by contract, or by returning to depot. Halon not restorable to usable condition shall be stored until approved destruction facilities are available.
- AF/CE shall direct that halon be removed from closure bases before being turned over to the Air Force Base Disposal Agency, and added to the AF account of the DLA ODC bank.

- AF/CE shall direct that halon removed from flightline fire extinguishers, crash rescue vehicles and other non-mission critical applications which have been declared excess, be added to the AF account of the DLA ODC bank.
- AF/CE shall direct that deactivated facility halon systems declared excess be added to the AF account of the DLA ODC bank. Halon in existing facility systems shall be made available to the AF account of the DLA ODC bank through attrition as facilities are modified and the halon systems are deactivated. Replacements for facility halon systems shall be programmed through normal maintenance, repair, or construction programs.
- AF/CE shall identify the location, amount, and type of halon in facilities. AF/LG shall identify the same information for AF/LG owned systems, the supply pipeline, and reserve storage. This information shall be used to ensure adequate amounts are available to meet mission critical applications and that excess halon is added to the AF account of the DLA ODC Bank.

CFC POLICY

REFRIGERANTS

- The acquisition of facility air conditioning systems, AGE equipment and other refrigeration and support equipment, using ODCs is prohibited as of January 1, 1993.
- AF/LG shall prohibit the purchase of commercial vehicles with ODC air conditioning equipment after June 1, 1993; and shall implement procedures to comply with Clean Air Act requirements for recycling ODCs when servicing existing vehicle ODC air conditioning systems.
- AF/CE shall develop installation guidance for managing refrigerant inventory so existing chillers can be maintained until the end of their economic life. A good maintenance and repair program is key to the success of this strategy. Refrigerators and other domestic equipment shall be replaced with non-ODC equipment at the end of its economic life. The purchase of recycled ODCs from commercial sources is permitted to maintain this equipment; however, this approach shall not be a substitute for effective management and recycling of existing refrigerant inventory and proper repair and maintenance of equipment.
 - AF/CE shall support projects for ODC recycling equipment, and chiller modifications for leak detection and efficient purge hardware in the Pollution Prevention Program.
 - AF/CE shall direct that ODCs be recovered from equipment being retired at the end of its economic life, and used to service the remaining ODC systems in the inventory.

--Chillers shall be programmed for replacement at the end of their normal service life as normal maintenance and repair.

Airborne Cooling Systems and Subsystems

- SAF/AQ shall direct that systems in development (pre Milestone III) not be designed to use ODC refrigerants.
- Existing systems that require ODC refrigerants are considered mission critical.
- SAF/AQ and AF/LG shall prohibit the purchase of newly produced ODC refrigerants, effective June 1, 1993. Refrigerants needed to meet mission critical applications will be obtained by using existing stocks, or from the DLA ODC bank. In the event the DLA ODC bank is unable to meet requirements, recycled refrigerant may be purchased from commercial sources.
- SAF/AQ shall identify total annual ODC refrigerant required to meet mission critical applications, by quantity, type, and application for SAF/AQ managed systems until the ODC requirement no longer exists. AF/LG shall identify same requirements for AF/LG managed systems. AF/CE shall consolidate Air Force total requirements and submit to SAF/MIQ. SAF/MI shall forward Air Force requirements to DLA for their use in managing the DoD ODC bank. The requirements shall be the total refrigerant required to make up for de minimis losses which occur during recycling, plus an amount required to account for ODCs lost due to catastrophic system failure. Correcting leaking systems shall be a top priority for system managers.

SOLVENTS

- Effective April 1, 1994 the purchase of ODC solvents, and equipment/systems/products requiring ODC solvents for maintenance or operation is prohibited.
- Any new system or modification to an existing system may not include the use of ODCs unless approved by SAF/AQ. This authority may not be delegated.
- No solvent uses shall be considered mission critical.

GENERAL POLICY PROVISIONS

Specifications, Standards and Technical Orders

- SAF/AQ and AF/LG and AFMC shall tailor all specifications and standards in use that require ODCs to allow non-ODC alternatives. Responsible activities will forward a copy of the tailored pages of the specification or standard with a request for revision to the preparing activity for the document. Responsible offices will also provide a complete copy to the Air Force Custodian and a copy of the cover letter to the Air Force Standardization Office.

--AFMC shall develop interim specifications, standards, and ODC purity requirements if necessary.

- AFMC shall review all Air Force Technical Orders in use to identify ODC uses and provide a list of affected Technical Orders to Program Managers and Directors. Program Managers and Directors shall revise them to allow the use of non-ODC alternatives with a goal to be complete by April 1, 1994.
- Substitute chemicals must comply with Section 5 of the Toxic Substances Control Act (TSCA) and Section 612 of the Clean Air Act Amendments of 1990 as specified by the EPA proposed rule "Stratospheric Ozone Protection: Significant New Alternatives Policy (SNAP) Program" (40 CFR Part 82). Alternatives which are hazardous or Class II ODCs may be used only as a last resort after all other environmentally preferable alternatives have been evaluated and rejected for technical or economic reasons.

Acquisition and Contract Actions Involving the Purchase Newly Produced ODCs:

- SAF/AQ and AF/LG shall implement procedures making non-use of ODCs a salient characteristic of any item, sub-item, product, service, or process. Further, the non-use of ODCs will normally be a technical requirement in all Air Force requisitions.
- AF/SG, in consultation with AF/LG, shall compile a list of national stock numbered items which contain ODCs. Base supply shall no longer accept orders for these items, and will no longer dispense them unless a waiver has been granted.
- Local acquisition of ODC containing products without a waiver is prohibited.

This section of the policy implements Public Law 102-484, National Defense Authorization Act for FY93, Section 326.

- No contract awarded after June 1, 1993 shall include a requirement to use ODCs or any requirement that can be met only through the use of ODCs, without approval of SAF/AQ.

--SAF/AQ can grant approval only by certifying that a suitable alternative is not currently available. This approval shall not be delegated.

--If SAF/AQ determines an economically feasible alternative is available for use in a contract under evaluation, the appropriate contracting officer shall enter into negotiations to modify the contract to require the use of the alternative.

- Beginning on October 1, 1993 and continuing for 8 calendar quarters thereafter, SAF/AQ is required to submit a report to SECDEF on approvals granted during the preceding quarter within 30 days after the end of each quarter.

- Beginning on January 1, 1997 and continuing for 4 years thereafter, SAF/AQ is required to submit a report to SECDEF on approvals granted during the preceding year within 30 days after the end of each year.

WAIVERS

Requirements of the USD(A) policy of August 11, 1992 and Public Law 102-484 are not waivable.

- AF/CE shall develop waiver application and approval procedures.
- Waivers for existing contracts prescribing ODCs which extend beyond April 1, 1994 (June 1, 1993 for refrigerants and halons) can be used when attempts to negotiate their accelerated elimination are unsuccessful. If a contractor does not meet the specified requirement of any solicitation, we can determine the contractor to be nonresponsive. If solicitation requirements preclude the use of ODCs in the manufacturing process or as a component of the final delivered end items and any contractor chooses not to comply with these requirements, these proposals or bids may be found nonresponsive.
- SAF/AQ, AF/LG and AF/CE are waiver approval authorities in their respective areas. SAF/MIQ will coordinate on all waiver applications.

--Waiver approval authorities will maintain copies of each approval on file until the waiver is no longer required, and will provide written semiannual status updates to SAF/MIQ.

- All waiver applications must certify that non-ODC alternatives do not exist, are not economically feasible, or that recycled ODCs cannot meet mission requirements. All mission critical applications, including those sustainable using recycled ODCs from the DLA bank, require a waiver.
- SAF/AQ, AF/LG, AF/CE and SAF/MIQ will draw on appropriate experts to consult in the approval process, as necessary.

Department of Defense INSTRUCTION

June 18, 1996
NUMBER 4715.4

USD (A&T)

SUBJECT: Pollution Prevention

References: (a) DoD Directive 4715.1, "Environmental Security," February 24, 1996
(b) DoD Instruction 4715.5, "Management of Environmental Compliance at Overseas Installation," April 22, 1996
(c) Overseas Environmental Baseline Guidance Documents, October 1992
(d) DoD Directive 5000.1, "Defense Acquisition," March 15, 1996
(e) through (J17) see enclosure¹ I

A. PURPOSE

This instruction:

1. Implements policy, assigns responsibility, and prescribes procedures under reference (a) for implementation or pollution prevention programs throughout the Department of Defense.
2. Designates Executive Agents to lead DoD implementation of key pollution prevention programs. Executive Agents are specified in enclosure 2.

B. APPLICABILITY AND SCOPE

This Instruction:

1. Applies to the Office of the Secretary of Defense (OSD); the Military Departments (including the Coast Guard when it is operating as a Military Service in the Navy); the Chairman of the Joint Chiefs of Staff; the Unified Combatant Commands, as appropriate; the Inspector General of the Department of Defense; the Defense Agencies; and the DoD Field Activities; including other integral DoD organizational entity or instrumentality established to perform a governmental function (hereafter referred to collectively as "the DoD Components"). The term "Military Services," as used herein, refers to the Army, the Navy, the Air Force and the Marine Corps.
2. Applies to DoD operations, activities, and installations in the United States, Puerto Rico, and territories or possessions over which the United States has jurisdiction, including Government-owned, contractor-operated (GOCO) facilities, and facilities supported by appropriated and non appropriated funds. Outside the United States, section D and paragraph F.2.c of this Instruction shall apply, consistent with DoD Instruction ~715.5 (reference (b)), international agreements, status of forces agreements, and Final Governing Standards issued for host nations (or the Overseas Environmental Baseline Guidance Document (reference (c)) where no Final Governing Standards have been issued).

¹ This reference can be found on the Defense Environmental Network Information Exchange (DENIX) electronic bulletin board.

3. Applies to Program Executive Officers, Program Managers, and all other Material Developers, consistent with the policies, requirements, and procedures of DoD Directive 50Q0.1 (reference (d)) and DoD 5000.2-R (reference (e)).

4. Does not apply to:

a. Procurement, use, generation, storage, processing, disposal, or Management in any sense of radioactive materials subject to regulation under E.O. 12344 (reference (f)), 42 U.S.C. 7158 (reference (g)); the Atomic Energy Act, 42 U.S.C. 2011 (reference (h)); or the Low Level Radioactive Waste Policy Act, 42 U.S.C. 2021b (reference (i)).

b. Additional pollution prevention requirements for transportation-related onshore and offshore facilities and vessels that are regulated by the U.S. Coast Guard. See 33 C.F.R. 154-156 (reference (j)) and 33 U.S.C. 1901-1912 (reference (k)).

c. The civil works function of the Department of the Army.

C DEFINITIONS

To maintain consistency throughout the DoD Components, the terms and definitions in enclosure 3 apply for this Instruction. and shall be used for any supplemental or delegated regulations, instructions or publications promulgated by the DoD Components.

D. POLICY

1. It is DoD policy to:

a. Ensure installations in the United States comply with applicable Federal, State, interstate, regional, and local environmental laws, regulations, and standards, and with relevant Executive Orders; or in the case of installations located outside the United States, with applicable Executive Orders, international agreements, Federal statutes with extraterritorial effect, and either the Final Governing Standards or the Overseas Environmental Baseline Guidance Document (reference (c)) where no Final Governing Standards have been issued.

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.

c. Reduce pollution through improvements in energy and water efficiency, the use of alternative fuels, and other activities that improve resource utilization.

2. It is DoD policy to accomplish the objectives using a management approach that:

a. Emphasizes pollution prevention, including improvements in energy and resource utilization, as the alternative of "first choice" in achieving compliance with applicable environmental requirements and Executive Orders.

b. Incorporates pollution prevention at installations, and into all phases of acquisition, operations, maintenance, support and ultimate disposal of weapon systems over the system life-cycle.

c. Uses the environmental management hierarchy to develop environmental solutions. In descending order of preference, the Department of Defense will:

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

(2) Reuse pollutants that cannot be eliminated. Recycle, in an environmentally safe manner, pollutants that cannot be reused.

(3) Treat, in an environmentally safe manner, pollutants that cannot be eliminated or recycled.

(4) Dispose or release pollutants into the environment only as a last recourse and only where such disposal or release can be controlled and conducted in a manner that is safe for human health and the environment and consistent with applicable legal requirements.

d. Reduces the life cycle costs of weapon systems by avoiding the use of hazardous materials.

e. Plans, programs and budgets to achieve the policies in this Instruction. Component budgeting procedures shall utilize the environmental quality classes defined in enclosure 3 and the following definitions for environmental compliance and pollution prevention:

(1) Environmental compliance includes all activities and projects that utilize end-of-pipe treatment or disposal methods to meet applicable environmental requirements.

(2) Compliance-type requirements that are satisfied by source reduction (pollution elimination or reduction), pollutant minimization, or recycling approaches are pollution prevention requirements and shall be funded as "pollution prevention."

f. Instills knowledge and understanding by all personnel (military and civilian) of pollution prevention requirements through comprehensive education, training, career development, and awareness programs.

g. Promotes pollution prevention through positive relations and partnerships with Federal, State, Indian tribal, regional, and local government officials as well as host country, other private, and public stakeholders.

h. Develops, demonstrates, and implements innovative pollution prevention technologies and business practices.

E. RESPONSIBILITIES

1. The Deputy Under Secretary of Defense For Environmental Security, under the Under Secretary of Defense for Acquisition and Technology, shall:

a. Consistent with the policies in DoD Directive 4715.1 (reference (a)), provide guidance, oversight, advocacy, and representation for environmental security pollution prevention programs.

b. Integrate the Department of Defense's pollution prevention program with other environmental, safety, and health programs.

c. Coordinate interaction with the Congress and Federal, State, Indian tribal, regional, host country, and local offices on pollution prevention issues.

d. Serve as the Department of Defense Environmental Executive in accordance with E.O. 12873 (reference (1)).

e. As the Principal Staff Assistant, ensure that the Defense Environmental Security Corporate Information Management (DESCIM) program management office develops and deploys systems that have the capability to support compliance with all applicable environmental laws and Executive Orders referenced by this Instruction, and allow for inventory management.

f. Monitor compliance with this Instruction, including progress toward achieving the appropriate measures of merit (enclosure 4), and periodically review the DoD Component's pollution prevention programs.

g. Actively participate and support weapon system integrated product teams to ensure environmental, safety, and health (ESH) requirements are adequately addressed.

h. Advise the Defense Acquisition Board and the overarching integrated product teams on ESH issues.

i. In coordination with the DoD Components, designate a Service or Defense Agency as lead or Executive Agent for special pollution prevention-related issues or areas.

j. Develop and promulgate Environmental Security pollution prevention goals and objectives, and approve the means of measurement, in coordination with the DoD Components, for attaining those goals and objectives.

2. The Director, Defense Research and Engineering, under the Under Secretary of Defense for Acquisition and Technology shall:

a. Develop an integrated, coordinated Science and Technology Program to address the pollution prevention technology requirements defined by the Deputy Under Secretary of Defense (DUSD(ES)).

b. Issue guidance to the DoD Components concerning pollution prevention Science and Technology Programs.

3. The Deputy Under Secretary of Defense for Logistics, under the Under Secretary of Defense for Acquisition and Technology, shall:

a. Develop policy and guidance to incorporate pollution prevention into all logistics activities, including support of weapon systems and hazardous material management systems.

b. Ensure that all environmental compliance statutory and Executive Order requirements that apply to DoD non-tactical vehicles are properly reflected in DoD 4500.36-R (reference (m)).

4. The Assistant Secretary of Defense for Economic Security, under the Under Secretary of Defense for Acquisition and Technology shall:

a. Ensure that the DoD Components revise appropriate specifications, standards, and other standardization documents to eliminate or reduce the use of extremely hazardous substances, toxic chemicals, ozone-depleting substances, and other hazardous materials consistent with the safety, health, and reliability requirements of each Component's mission, as required by E.O. 12856 (reference (n)).

b. Promote the use of environmentally preferable products to the maximum extent practicable by revising specifications and standards, as appropriate, as required by E.O. 12873 (reference (1)).

c. Promote pollution prevention by assisting the DoD Components to develop programs for energy conservation and use of energy from renewable sources, where cost effective.

d. Establish programs and policies for DoD-owned or leased buildings and facilities that promote sustainable development goals in accordance with E.O. 12902 (reference (o)), and coordinate policy and implementation oversight with DUSD(ES) to ensure program environmental goals are achieved.

5. The Director, Defense Logistics Agency under the Under Secretary of Defense for Acquisition and Technology shall:

a. Establish procedures and controls that ensure that when recyclable materials are consigned for disposal

to the Defense Reutilization and Marketing Service (DRMS) on behalf of a qualified recycling program, 100% of any proceeds, less the costs of sales and handling, are returned to installations in accordance with established accounting procedures.

b. Operate and manage the DoD Ozone Depleting Substances Reserve including preparation of reports if required by Congress, through DUSD(ES), in accordance with 10 U.S.C. 2301 (reference (p)). Establish procedures governing operation of the Reserve.

6. The Heads of the DoD Components shall:

a. Ensure compliance with this Instruction.

b. Ensure pollution prevention is incorporated into all acquisition phases and across the entire life cycle (from concept exploration through system demilitarization and disposal) of all weapon systems. Pollution prevention for an active acquisition program shall be done in accordance with DoD Directive 5000.1 (reference (d)) and DoD 5000.2-R (reference (e)). Pollution prevention for fielded weapon systems not included within the scope of an active acquisition program shall be done in accordance with this Instruction.

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

7. The Secretaries of the Military Departments, the Directors of the Defense Agencies and the DoD Field Activities shall:

a. implement programs to monitor and achieve progress toward the Department's pollution prevention measures of merit. Measures of merit are given in enclosure 4.

b. Establish an affirmative procurement program in accordance with 4~ U.S.C. 6962 (reference (q)) and E.O. 12873 (reference (1)).

c. Establish a program to purchase and operate alternative-fueled vehicles to reduce the emission of pollutants associated with non-tactical vehicles, as required by P.L. 102-486 (reference (r)), E.O. 12844 (reference (s)), and DoD 4500.36-R (reference (m)).

d. Research and develop innovative pollution prevention technologies in accordance with Director, Defense Research and Engineering guidance through partnerships among Federal agencies, Government laboratories, and the private sector.

e. Establish and execute cost-effective waste prevention and qualified recycling programs to reduce the volume of non-hazardous solid waste in accordance with 10 U.S.C. 2577 (reference (t)) and E.O. 12873 (reference (1)). Establish procedures governing qualified recycling programs.

f. Execute strategies to eliminate reliance on Ozone Depleting Substances (ODS) in accordance with E.O. 12843 (reference (u)) and 10 U.S.C. 2301 (reference (p)).

g. Provide necessary data to the Defense Logistics Agency so as to allow it to manage the DoD ODS Reserve and meet any reporting requirements, including those in DoD 4160.21-M (reference (v)).

h. Participate in periodic pollution prevention in-progress reviews (IPRs) as required by DUSD(ES).

i. Carry out the responsibilities of a lead or DoD Executive Agent for specific pollution prevention-related areas when designated by DUSD(ES) under paragraph E. 1 .i., above. Designated DoD Active Agents are in enclosure 2. The lead or Executive Agent shall:

(1) Develop a charter outlining functions and responsibilities, to be approved by DUSD(ES) and coordinated with the DoD Components.

(2) Report as appropriate, but at a minimum semi-annually, to the appropriate Defense Environmental Security Council (DESC) committee.

(3) Ensure all policy issues are coordinated by the appropriate DoD Component and OSD chains of command.

j. Raise emerging DoD pollution prevention issues through the DESC, the Environment, Safety and Occupational Health Policy Board, or the DESC Pollution Prevention Committee, as established under DoD Directive 4715.1 (reference (a)).

F. PROCEDURES

1. The Heads of the DoD Components shall establish procedures that ensure that fielded weapon systems, not included within the scope of an active acquisition program, establish and maintain a pollution prevention program. The scope of the pollution prevention program shall, at a minimum, include the requirements that are applicable to active acquisition programs as required in DoD 5000.2-R (reference (e)), paragraphs 3.3.6, 4.3.7.2, 4.3.7.4, and 4.3.7.5.

2. The Secretaries of the Military Departments, the Directors of the Defense Agencies and the DoD Field Activities shall:

a. Participate in annual pollution prevention reviews as required by DUSD(ES). The review shall include, at a minimum, a progress report on the measures of merit outlined in enclosure 4.

b. Report to DLA estimates for ODS Defense requirements and provide them the data necessary to prepare any required reports, including those in 10 U.S.C. 2301 (reference (p)).

c. Ensure that all installations worldwide:

(1) Maintain inventory management and control processes that minimize the use of hazardous materials, as appropriate, in the most inimical manner.

(2) 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.

(3) Establish recycling programs and prodders that:

(a) Ensure, where cost effective, that all installations and outposts have, or participate in, qualified recycling programs, and that installation recycling programs are available to serve all host and tenant organizations occupying space on the installation, including leased space.

(b) Ensure, where cost effective, that contracts, awarded after the effective date of this Instruction, that provide for contractor operation of a government-owned or leased facility located within the United States, its territories, or possessions, include provisions that obligate the contractor to participate in a recycling program. Where cost effective, existing contracts covering GOCO facilities should be modified to incorporate recycling provisions. The DoD Components should require participation by contractors operating government-owned or leased facilities overseas where recycling programs are available.

(c) Ensure that qualified recycling program procedures address recyclable materials, excluded materials, and other qualified recycling program materials. See definitions.

(d) Divert recyclable materials (see definition) from the non-hazardous solid waste stream where economically feasible. Individual types of recyclable materials that make up a substantial percentage of the non-hazardous waste stream should be included in recycling programs unless doing so will make the overall recycling program unprofitable. Recyclable materials do not require informal screening as defined in DoD 4160.21-M (reference (v)).

(e) Establish controls that ensure excluded materials (see definition), including those listed in 32 C.F.R. 172.2(b)(3) (reference (w)), are not sold through a qualified recycling program.

(f) Authorize installation commanders as appropriate, to sell directly recyclable and other qualified recycling program materials. or to consign them to the DRMS for sale.

1 Installations must implement Component procedures that ensure U.S. trade security control policies are followed in accordance with DoD Instruction 4160.27 (reference (x)) and DoD 4160.21-M-1 (reference (y)), prior to directly selling firing-range-expended brass or mixed metals gleaned from firing range cleanup that do not require demilitarization and that are Munitions List Items (MLI) or Strategic List Items (SLI). Expended brass shall be crushed, shredded, or otherwise destroyed prior to public sale.

2 Reuse Screening: Prior to selling directly other qualified recycling program materials, installations shall implement Component procedures for local reuse screening to consider reutilization, transfer, and donation programs in accordance with DoD 4160.21-M (reference (v)).

3 Ensure that outside the United States, disposition of recyclable and other qualified recycling program materials, derived from goods that have been imported duty-free, is accomplished, if at all, consistent with the provisions contained in status of forces, surplus or excess property agreements, or other international agreements with host nations

(g) Ensure that distribution of recycling proceeds is consistent with 10 U.S.C. 2577 (reference (t)).

1 Sale proceeds shall first be used to cover the costs directly attributable to all installation recycling programs, including, but not limited to, manpower, facilities, equipment, overhead, and other capital investments. After these costs are recovered, installation commanders may use up to 50% of the remaining proceeds for pollution abatement, pollution prevention, composting and alternative fueled vehicle infrastructure support and vehicle conversion, energy conservation, or occupational safety and health projects, with first consideration given to projects included in the installation's pollution prevention plan. Any remaining proceeds may be transferred to the non-appropriated Morale, Welfare and Recreation account for any approved programs.

2 An accounting and control system shall be established for recycling programs that provides detailed management and audit information, tracks material quantity handled, calculates sales and handling costs for recycled material, and tracks expenditures made for appropriate projects and Morale, Welfare and Recreation programs. Integrity of the audit trail will be a priority concern.

3 Materials: Ensure that appropriate management controls are in place for recyclable materials that may be hazardous. such as lead-acid batteries.

(4) Operate a composting program or participate in a regional composting program, if it is practicable to do so.

(d) Ensure all installations in customs territory of the United States and Guarn meet the following additional requirements:

(1) Comply with the Toxic Release Inventory and Pollution Prevention Act Reporting requirements of section 3-304 of Executive Order 12856 (reference(n)).

(2) Comply with the Emergency Planning and Community Right-to-Know Reporting Responsibilities requirements of section 3-305 of Executive Order 12856 (reference (n)).

(3) Ensure that pollution prevention plans required by subparagraph F.2.c.(2), above, also comply with sections 3-302(d), 5-505, and 5-508 of Executive Order 12856 (reference (n)). In addition, the pollution prevention plans shall describe how the installation will contribute to meeting the goals of the Pollution Prevention Measures of Merit contained in enclosure 4.

(e) Ensure all installations in the United States establish and execute a program to reduce the emission of air pollutants by DoD non-tactical vehicles by:

(1) Acquiring alternative-fueled vehicles to meet the requirements of P.L. 102-486 (reference (r)), Executive Order 12844 (reference (s)), and DoD 4500.36-R (reference (m)), ensuring that such alternative-fueled vehicles meet mission needs.

(2) Ensuring sufficient supporting infrastructure for alternative-fueled vehicles, relying on commercial infrastructure where feasible.

(3) Planning placement of alternative-fueled vehicles to obtain maximum air quality benefits, including Clean Air Act credits under 42 U.S.C. 7401-7671 (reference (z)).

3. The Director, Defense Logistics Agency, under the Under Secretary of Defense for Acquisition and Technology, shall:

a. Ensure that a uniform control system is established by the DRMS for recyclable materials consigned for disposal. This system shall be sufficiently detailed to provide management audit information to permit the DRMS to properly calculate sales and handling costs, and reimburse installations and organizations 100% of the proceeds, net of costs, for materials sold.

b. Prepare ODS report for DoD submission to Congress as required by 10 U.S.C. 2301 (reference (p)). The report control symbol (RCS) is (DD-A&T(Q)1958).

G. INFORMATION REQUIREMENTS

1. Emergency Planning and Community Right-to-Know Act (EPCRA) Reporting. All DoD facilities within the customs territory of the United States and Guam meeting the 42 U.S.C. 11049(4) (reference (aa)) definition of "facility," regardless of Standard Industrial Classification Code, shall meet all requirements of Executive Order 12856 (reference (n)). All DoD facilities exceeding the Section 313 of 42 U.S.C. 11023 (reference (bb)) toxic chemical thresholds must file a Toxic Chemical Release Inventory report, Form R, to the Environmental Protection Agency (EPA) and appropriate State regulatory agency for each toxic chemical meeting threshold requirements even if no releases or off-site transfers have occurred. Each DoD Component shall submit a copy of each Form R from their installations to DUSD(ES).

2. Alternative-Fueled Vehicle Reporting. The DoD Components shall provide required information to Department of Energy's (DoE) Energy Information Administration (Form EIA 886, Part III), the General Services Administration (GSA Standard Form 82), and will prepare an annual report as required by Section 6 of E.O. 12844 (reference (s)). Each Component will forward a copy of its annual report to DUSD(ES).

3. Alternative Fuels Reporting. The DoD Components shall report directly to the ASD(ES) on DoE's Federal Energy Management Program (DoE Form 6200.2).

4. Office of Federal Procurement Policy and E.O. 12873 (reference (1)). The DoD Components are required

annually to provide data to DUSD(ES) that summarizes their purchases of commodities not purchased through other government agencies meeting the EPA guideline requirements and other actions they are taking to meet the intent of the Executive Order. See 42 U.S.C. 6962 (reference (q)) and E.O. 12873 (reference (1)).

5. Annual Pollution Prevention Review. The DoD Components will present an IPR on their program (per subparagraph E.7.h., above) to DUSD(ES).

6. Executive Order 12856 (reference (n)). The DoD Components are required to provide information annually to DUSD(ES) that summarizes their actions taken to implement the requirements of reference (n).

H. EFFECTIVE DATE

This Instruction is effective immediately.

SIGNED

Paul Kaminski

Under Secretary of Defense for Acquisition and
Technology

Enclosures, - 4

1. References
2. Executive Agents for Environmental Media and Specialty Areas
3. Definitions
4. DoD Pollution Prevention Measures of Merit

REFERENCES

- (e) DoD 5000.2-R "Mandatory Procedures for Major Acquisition Programs (MDAPS) and Major Automated Information System (MAIS) Acquisition Programs," March 15, 1996
- (f) Executive Order 12344, "Naval Nuclear Propulsion Program," February 1, 1982
- (g) Section 7158 of title 42, United States Code
- (h) Section 2011 of title 42, United States Code
- (i) Section 2021 of title 42, United States Code
- (j) Title 33, Code of Federal Regulations, Section 154-156
- (k) Sections 1901-1912 of title 33, United States Code
- (l) Executive Order 12873, "Federal Acquisition, Recycling, and Waste Prevention," October 20, 1993
- (m) DoD 4500.36-R "Management, Acquisition, and Use of Motor Vehicles," March 29, 1994
- (n) Executive Order 12856, "Federal Compliance With Right-to-Know Laws and Pollution Prevention Requirements," August 3, 1993
- (o) Executive Order 12902, "Energy Efficiency and Water Conservation at Federal Facilities," March 8, 1994
- (p) Section 326 of Public Law 102484, section 2301 of title 10, United States Code²
- (q) Section 6962 of title 42, United States Code
- (r) Public Law 102-486, "Energy Policy Act of 1992," October 24, 1992³
- (s) Executive Order 12844, "Federal Use of Alternative Fueled Vehicles," April 21, 1993
- (t) Section 2577 of title 10, United States Code
- (u) Executive Order 12843, "Procurement Requirements and Policies for Federal Agencies for Ozone Depleting Substances," April 21, 1993
- (v) DoD 4160.21-M, "Defense Reutilization and Marketing Manual." March 23, 1990. authorized by DoD Directive 4160.21, December 5, 1980
- (w) Title 32, Code of Federal Regulations, Part 172
- (x) DoD Instruction 4160 27, "Demilitarization of Materiel," December 14, 1988
- (y) DoD 4160.21-M-1, "Defense Demilitarization Manual." October 21, 1991, authorized by DoD Directive 4160.21, December 5, 1980
- (z) Sections 7401-7671 of title 42, United States Code
- (aa) Section 11049 of title 42, United States Code
- (bb) Section 11023 of title 42, United States Code
- (cc) Section 6374 of title 12, United States Code
- (dd) Section 1401 of title 19, United States Code
- (ee) Sections 4321-4370 of title 42, United States Code
- (ff) Title 40, Code of Federal Regulations, Part 302
- (gg) Section 7671 of title 42, United States Code
- (hh) Federal Register, Volume 57, page 33753. July 30, 1992
- (ii) Sections 13101-13109 of title 42, United States Code
- (jj) Section 6903 of title 42, United States Code

² 10 U.S.C. 2301 has been repealed, but the requirement remains in the note and still applies.

³ Refers to multiple parts of the law.

Jun 18, 96
4715.4 (Encl 2)

EXECUTIVE AGENTS FOR ENVIRONMENTAL MEDIA AND SPECIALTY
AREAS

Navy-Ozone Depleting Substances

DEFINITIONS

1. Acquisition Program. A directed, funded effort that is designed to provide a new, improved, or continuing weapons system or automated information system (AIS) capability in response to a validated operational need. Acquisition programs are divided into categories, which are established to facilitate decentralized decision-making and execution and compliance with statutory requirements. (DoD Directive 5000.1 (reference (d))).
2. Alternative Fuel. A fuel as defined in 42 U.S.C. 6374 (g)(2) (reference (cc)).
3. Alternative Fueled Vehicle. A vehicle as defined in Section 6374 (g)(3) of reference (cc).
4. Composting. A controlled process for managing the degradation of plant and other organic wastes to produce a useful product that can be used as mulch or soil conditioner.
5. Customs Territory. "All Territories and possessions of the United States except the Virgin Islands, American Samoa, Wake Island, Midway island, Kingman Reef, Johnston Island and the Island of Guam." (from 19 U.S.C. 1401 (h) (reference (dd))).
6. Environment. The term "environment" includes water, air, and land and the interrelationship which exist among and between water, air, and land and all living things. (from 42 U.S.C. 11049(2) (reference (aa))).
7. Environmental Security. A program that enhances readiness by institutionalizing the Department of Defense's environmental, safety and occupational health awareness, making it an integral part of the Department's daily activities. Environmental Security is comprised of cleanup, compliance, conservation, pollution prevention, safety, occupational health, explosives safety, fire and emergency services, pest management. environmental security technology and international activities.
8. Environmentally Preferable. Products or services that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose. This comparison may consider raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance, or disposal of the product or service. (from Active Order 1'-73. section 201 (reference (1))).
9. Environmental Quality Classes. This includes the following designations:
 - a. Class 0 - Includes activities needed to cover the recurring administrative, personnel and other costs associated with managing environmental programs that are necessary to meet applicable compliance requirements (Federal, State, and local laws, regulations, E.O.s, DoD policies, and Final Governing Standards overseas or the "Overseas Environmental Baseline Guidance Document" (reference (c)) or which are in direct support of the military mission. Also, includes environmental management activities associated with the operation of facilities, installations and deployed weapon systems. Recurring costs consist of manpower, training, supplies, hazardous waste disposal, operating recycling activities, permits, fees, testing and monitoring and/or sampling and analysis, reporting and record keeping (e.g. Toxic Release Inventory reporting), maintenance of environmental equipment, and compliance self assessments.
 - b. Class I - Projects and activities needed that are currently out of compliance (have received an enforcement action from a duly authorized Federal, State, or local authority; have a signed compliance agreement or received a consent order; and/or have not met requirements based On applicable Federal, State,

and local laws, regulations, E.O.s, DoD policies, and Final Governing Standards overseas or the Overseas Environmental Baseline Guidance Document (reference (c)). This class also includes projects and activities needed that are not currently out of compliance (deadlines or requirements have been established by applicable requirements, but deadlines have not passed or requirements are not in force) but shall be if projects or activities are not implemented within the current program year. Those activities include the preparation of plans (e.g., National Environmental Policy Act, 42 U.S.C. 43214370(d) (reference (ee)), documentation, master plans, emergency response plans, integrated natural and cultural resource management plans, pollution prevention plans; etc.), opportunity assessments and inventories. The preferred approach is to use pollution prevention projects or activities, if cost effective, to bring a facility into compliance. Overseas, that class includes projects and activities necessary to alleviate the human health threats to ongoing operations or necessary to comply with applicable treaties and agreements.

c. Class II - Projects and activities needed that are not currently out of compliance (deadlines or requirements have been established by applicable Federal, State, and local laws, regulations, E.O.s, DoD policies and Final Governing Standards overseas or reference (c), but deadlines have not passed or requirements are not in force) but shall be if projects or activities are not implemented in time to meet an established deadline beyond the current program year. The preferred approach is to use pollution prevention projects or activities, if cost effective, as the means of maintaining or bringing a facility into compliance. Overseas, that class includes projects and activities identified using risk based prioritization practices that meet the long term objective of full implementation of the Final Governing Standards for each foreign country where DoD maintains substantial installations.

d. Class III - Includes projects and activities that are not explicitly required by law but are needed to address overall environmental goals and objectives.

10. Excluded Materials. Excluded materials may not be sold through a qualified recycling program, and the proceeds from their sale SHALL NOT be returned to a qualified recycling program. Excluded items include, but are not limited to:

- a. Government-furnished material:
- b. Precious metal bearing scrap:
- c. Hazardous waste (including household hazardous waste);
- d. Ozone depleting substances;
- e. Electrical components;
- f. Unopened containers of solvents, paints, or oil;
- g. Fuels;
- h. Material that can be sold (as is) as a usable item;
- i. Repairable items that may be used again for their original purposes or functions; e.g., used vehicles, vehicle or machine parts, etc.;
- j. Ships, aircraft, weapons, and other material required to be demilitarized or mutilated, and scrap resulting from demilitarization.
- k. All Munitions List Items (MLI) and Strategic List Items (SLI) as defined in DoD 4160.21-M-1 (reference (y)), except firing range expended brass and mixed metals gleaned from firing range cleanup.
 1. Types of surplus personal property whose sales proceeds must be deposited to accounts other than a qualified recycling program per 32 CFR 172, Appendix B (reference (w)).
 - (1) Scrap generated from Defense Business Operations Fund (DBOF) activities;
 - (2) Usable personal property purchased by DBOF activities;
 - (3) Property purchased with commissary surcharge funds;
 - (4) Automatic data processing equipment owned by the General Services Administration;
 - (5) Property purchased for the Military Assistance Program or purchased with Foreign Military Sales Administrative funds;

- (6) Coast Guard property;
- (7) Property owned by non appropriated fund activities;
- (8) Lost, abandoned, or unclaimed privately owned personal property;
- (9) Property owed by a country or international organization;
- (10) Bones, fats, and meat trimmings generated by a commissary.

11. Extremely Hazardous Substances. A substance as defined 42 U.S.C. 11049(3) (reference (aa)).

12. GOCO. Government-owned/contractor-operated facility that is owned by the Federal Government but all or portions of which are operated by private contractors.

13. Government-Furnished Material. Property that may be incorporated into or attached to a deliverable end item or that may be consumed or expensed in performing a contract. It includes assemblies, component parts, raw and processed materials and small tools and supplies that may be consumed in nominal use in performing a contract.

14. Hazardous Substance. Any substance listed in Table 302.4 of 40 CFR Part 302 (reference (ff)).

15. Other Qualified Recycling Program Materials. Materials that fit neither the definition of recyclable materials nor the definition of excluded materials are classified as other qualified recycling program materials.

16. Ozone Depleting Substances. Means the substances controlled internationally under the Montreal Protocol and nationally under Title VI of the Clean Air Act Amendments (reference (gg)). This includes both Class I and Class II substances as follows:

a "Class I substance" means any substance designated as Class I in 57 FR 33753 (reference (hh)), including chlorofluorocarbons, halons, carbon tetrachloride, and methyl chloroform and any other substance so designated by the Environmental Protection Agency (EPA) by regulation at a later date.

b. "Class II substance" means any substance designated as class II in 57 FR 33753 (reference (hh)), including hydrochlorofluorocarbons and any other substance so designated by the EPA by regulation at a later date.

17. Pollution and/or Pollutants. The terms "pollution" and "pollutant" refer to all non product outputs, irrespective of any recycling or treatment that will or may reasonably be anticipated to cause deleterious affects to the public health or the environment.

18. Pollution Prevention. "Pollution prevention" means 'source reduction,' as defined in the Pollution Prevention Act (PPA) of 1990, 42 U.S.C. Sections 13101-13109 (reference (ii)), and other practices that reduce or eliminate the creation of pollutants through: (a) increased efficiency in the use of raw materials, energy, water, or other resources; or (b) protection of natural resources by conservation. (Also See "Source Reduction").

19. Procurement. The acquiring by contract with appropriated funds for supplies or services by and for the use of the Federal Government through purchase or lease, whether the supplies or services are already in existence or must be created, developed, demonstrated and evaluated.

20. Qualified Recycling Program (EUROPE). Organized operations that require concerted efforts to divert or recover scrap or waste, as well as efforts to identify, segregate, and maintain the integrity of the recyclable materials in order to maintain or enhance their marketability. If the program is administered by a DoD component, a QRP includes adherence to a control process providing accountability for all materials

processed through program operations.

21. Recovered Material. Waste materials and by-products that have been recovered or diverted from solid waste, but such term does not include those materials and by-products generated from, and commonly reused within, an original manufacturing process. (42 U.S.C. 6903(19) (reference jj)).

22. Recyclable Materials. Recyclable materials can include, but are not be limited to: high-quality paper and paper products; mixed paper; newspaper; cardboard; plastic; metal cans; glass; used oil (except when hazardous waste; batteries; and tires). In addition, scrap (including ferrous and non-ferrous scrap) and firing range expended brass and mixed metals gleaned from firing 3-4 range cleanup that do not require demilitarization may be included in a qualified recycling program.

23. Recycling. The series of activities, including collection, separation, and processing, by which products or other materials are recovered from the solid waste stream for use in the form of raw materials in the manufacture of new products other than fuel for producing heat or power by combustion (from Executive Order 12873, Section 207 (reference (1))).

24. Source Reduction. As defined in the Federal Pollution Prevention Act (reference (ii)), source reduction is "any practice that a.) reduces the amount of any hazardous substance, pollutant, or contaminant entering any waste stream or otherwise released into the environment (including fugitive emissions) prior to recycling, treatment, and disposal; and b.) reduces the hazardous to public health and the environment associated with the release of such substances, pollutants, or contaminants. The term includes equipment or technology modification, process or procedure modification, reformulation or redesign of products, substitution of raw materials, and improvements in housekeeping, maintenance, training, or inventory control." Source reduction does not entail any reran of waste management (e.g., recycling and treatment).

25. Standardization Document. A generic term for a document used to standardize on an item of supply, process, procedure, method, data, practice, or engineering approach. Standardization documents include military specifications, standards handbooks and bulletins; Federal specifications and standards; guide specifications; Commercial Item Descriptions; and Non-Government Standards.

26. Toxic Chemical. A chemical as defined in 42 U.S.C. 11023(c) (reference (bb)).

27. Waste Minimization. Source reduction and the following types of recycling: (a.) beneficial use/reuse and (b.) reclamation. Waste minimization does not include recycling activities whose uses constitute disposal and burning for energy recovery.

DoD Pollution Prevention Measures of Merit

1. By the end of Calendar Year (CY) 1999, reduce total releases and off-site transfers of toxic chemicals 50% from the 1994 toxic release inventory baseline. The amount of toxic releases and off-site transfers will be measured and reported in pounds.
2. By the end of CY 1999, reduce the disposal of hazardous waste 50% from the 1992 baseline. The amount of hazardous waste disposal will be measured and reported in pounds.
3. By the end of CY 1999, reduce the disposal of non-hazardous solid waste 50% from the 1992 baseline. The amount of solid waste disposal will be measured and reported in pounds.
4. By the end of CY 1999, ensure that 50% of non-hazardous solid waste generated will be recycled. The amount of non-hazardous solid waste recovered and sold DoD-wide for reuse will be measure and reported in pounds.
5. By the end of CY 1999, ensure that 75% of DoD Acquisitions of new, non-tactical vehicles are alternatively fueled vehicles.

ACC POLLUTION PREVENTION GOALS

14 JUN 96

| <i>PROGRAM COMPONENT:</i> | <i>BASELINE YEAR:</i> | <i>GOAL:</i> |
|--|-----------------------|--|
| Hazardous Waste Reduction | 1992 | 25% reduction in disposal by 31 Dec 96 50% reduction in disposal by 31 Dec 99 80% reduction in disposal by 31 Dec 05 |
| Environmental Protection Agency 17 Industrial Toxic Pollutants (EPA-17) | 1992 | 50% reduction of purchases by 31 Dec 96 |
| Hazardous Material Usage Goal | Annual | Establish new HazMat reduction goal annually |
| TRI Chemical Releases | 1994 | 50% reduction of total releases and off-site transfers by 1999 |
| Pesticide Management | FY93 | 50% reduction in pounds of active ingredient by FY 2000 |
| Volatile Air Emissions | 1993 | 50% reduction in pounds released by 31 Dec 99 |
| Ozone Depleting Substances (ODS) | 1992 | 99% usage reduction by 31 Dec 98 |
| | 1995 | 20% reduction in number of ODS "units" and quantity of ODS installed in those units and in bench stock by 31 Dec 00 |
| | | Eliminate facility chiller units that use chlorofluorocarbons (CFCs) by 2000 |
| Solid Waste Reduction | 1992 | 30% reduction in disposal by 31 Dec 96 50% reduction in disposal by 31 Dec 97 70% reduction in disposal by 31 Dec 05 |
| Solid Waste Recycling | 1992 | 25% recycling rate by 31 Dec 95 30% recycling rate by 31 Dec 97 50% recycling rate by 31 Dec 05 |
| Environmentally Preferable Products (Affirmative Procurement) | N/A | Purchase of products containing recycled material |
| Energy Conservation | 1985 | 10% reduction in BTU/sq ft by 1995 20% reduction in BTU/sq ft by 2000 30% reduction in BTU/sq ft by 2005 |

DEPARTMENT OF DEFENSE INSTRUCTION 4150.7

SUBJECT: DoD Pest Management Program 22 Apr 96

- (a) DoD Directive 4715. 1, "Environmental Security," February 24, 1996
- (b) Section 125 of title 10, United States Code
- (c) DoD 5025. 1-M, "DoD Directives System Procedures," August 1994, authorized by DoD Directive 5025.1, June 24, 1994
- (d) "DoD Plan for the Certification of Pesticide Applicators of Restricted Use Pesticides," December 8, 1985 (e) through (p), see enclosure I

A. PURPOSE

This Instruction:

- 1. Implements policy, assigns responsibility, and prescribes procedures for the Department of Defense Pest Management Program, as established under references (a), (b), and the Joint Service Regulation, "Joint Field Operating Agencies of the Office of The Surgeon General of the Army," August 16, 1988.
- 2. Authorizes the publication of DoD 4150.7-M, "DoD Pest Management Training and Certification," in accordance with reference (c).
- 3. Authorizes the publication of DoD 4150.7-P, "DoD Plan for the Certification of Pesticide Applicators," in accordance with reference (c). 4. Designates the Secretary of the Army as the DoD Executive Agent for the Armed Forces Pest Management Board (AFPMB).

B. APPLICABILITY AND SCOPE

This Instruction:

- 1. Applies to the Office of the Secretary of Defense (OSD), the Military Departments (including the Coast Guard when it is operating as a Military Service in the Navy), the Chairman of the Joint Chiefs of Staff, the Unified Combatant Commands, the Inspector General of the Department of Defense, the Defense Agencies, and the DoD Field Activities (hereafter referred to collectively as "the DoD Components"). The term "Military Services," as used herein, refers to the Army, the Navy, the Air Force, and the Marine Corps.
- 2. Applies to all DoD operations, activities, and installations worldwide including appropriated fund activities; non-appropriated fund activities; contracted activities; and Government-owned, contractor-operated facilities.

3. Applies to all DoD buildings, structures, lands, public works, equipment, aircraft, vessels, and vehicles.
4. Applies to all DoD vector control and pest management operations performed worldwide during peacetime, wartime, and military deployments including those done by contract.
5. Outside the Continental United States (OCONUS), applies consistent with applicable international agreements, Status of Forces Agreements, Final Governing Standards (FGS) issued for the host nations, or where no such FGS have been issued, the criteria in the Overseas Environmental Baseline Guidance Document.
6. Does not apply to:
 - a. The civil works function of the Army Corps of Engineers.
 - b. State-owned or State-operated (funded) installations or facilities that the National Guard uses part-time or full-time.

C. DEFINITIONS

Terms used in this Instruction are defined in enclosure 2.

D. POLICY

It is DoD Policy under DoD Directive 4715.1 (reference (a)) to:

1. Establish and maintain safe, effective, and environmentally sound integrated pest management (IPM) programs to prevent or control pests and disease vectors that may adversely impact readiness or military operations by affecting the health of personnel or damaging structures, materiel, or property.
2. Ensure DoD pest management programs achieve, maintain, and monitor compliance with all applicable Executive Orders and applicable Federal, State, and local statutory and regulatory requirements.
3. Incorporate sustainable IPM philosophy, strategies, and techniques in all aspects of DoD and Component vector control and pest management planning, training, and operations including installation pest management plans and other written guidance to reduce pesticide risk and prevent pollution.

E. RESPONSIBILITIES

1. The Under Secretary of Defense for Acquisition and Technology, through the Deputy Under Secretary of Defense (Environmental Security) (DUSD(ES)), shall:
 - a. Oversee the implementation of this Instruction and represent the Secretary of Defense for both internal and interagency matters on the DoD Pest Management Program.
 - b. Provide operational direction and supervision to the AFPMB.
 - c. Provide policy guidance and coordination for the DoD Pest Management Program.
 - d. Maintain and enforce the DoD Plan for the Certification of Pesticide Applicators of Restricted Use Pesticides (reference (d)).
 - e. Monitor compliance with this Instruction, including the Components' use of the DoD Pest Management Program Measures of Merit (enclosure 3).
 - f. Coordinate pest management actions with the Assistant Secretary of Defense for Health Affairs when human health is an issue.
2. The Director of Defense Research and Engineering, under the Under Secretary of Defense for Acquisition and Technology, shall, in coordination with DUSD(ES), ensure that an appropriate level of effort is provided in research, development, and transfer of technology to support DoD pest management requirements.
3. The Heads of the DoD Components shall:
 - a. Establish and maintain programs that conform to the policy, procedures, and requirements specified in this Instruction including the program elements in enclosure 4.
 - b. Emphasize IPM techniques in their pest management programs as a means to reduce pesticide risk and prevent pollution.
 - c. Exercise oversight and review of installation pest management programs from the Components' major command and headquarters level.
 - d. Maintain accurate and complete reporting and record-keeping of pest management operations and pesticide use.
 - e. Ensure that actions taken under the policy in section D, above, are consistent with DoD Directive 4715.1 (reference (a)).

- f. Implement programs to achieve, maintain, and monitor compliance with applicable Federal, State, and local statutory and regulatory requirements for pest management.
- g. Ensure that Commanders of deployed forces enforce the use of all appropriate personal protection measures, including arthropod skin and clothing repellents and bed nets, to protect their troops from vector-borne diseases and rodent and arthropod health threats.
- h. Ensure that any pesticide applications, excluding arthropod skin and clothing repellents, performed during military operations are recorded using DD Form 1532-1, "Pest Management Maintenance Report," or a computer-generated equivalent. The DoD Components shall establish a method to archive these records for permanent retention.
- i. Ensure the implementation of IPM in Component pest management programs, operations, regulations, publications, pest management training, and pesticide applicator certification programs.
- j. Coordinate pest management actions, as appropriate, with the Assistant Secretary of Defense for Health Affairs, with State and local governments, and with host-nation agencies involved with pest management when human health is an issue.
- k. Ensure that the Component's DoD pest management consultants review installation pest management programs on-site at least every 36 months and annually review installation pest management plans for adherence to DoD policy.
- l. Establish procedures to ensure that recommendations from on-site pest management program reviews and annual reviews of pest management plans will result in appropriate corrective action.
- m. Designate Component senior pest management consultants as the primary points of contact for the Component's pest management program and for membership on the AFPMB in support of the Defense Environmental Security Council and inform the Executive Director, AFPMB, of these designated consultants.
- n. Designate pest management consultants, as certifying officials under the DoD Plan for the Certification of Pesticide Applicators of Restricted Use Pesticides (reference (d)), to certify the competency of the Component's pesticide applicators; establish procedures for designating and certifying specific DoD pest management consultants in aerial application pest control to approve pest management projects requiring aerial application of pesticides; and inform the Executive Director, AFPMB, of these designated consultants.

- o. Implement pest management measures of merit (enclosure 3) and answer data calls for the measures of merit from the DUSD(ES).
- p. Monitor pesticides available for purchase in DoD commissaries and Component exchanges to ensure the pesticides available for sale are least-hazardous pesticides that are compatible with DoD IPM programs and are pesticides that comply with applicable Federal, State, and local laws. DoD commissaries and Component exchanges OCONUS shall comply with subsection B.5., above.
- q. Cooperate with State and local government agencies involved with pest management.
- r. Participate in the development of the Defense Environmental Security Corporate Information Management (DESCIM) process for pest management and use the pest management information system when fielded.
- s. Provide management support, resources, and a professionally qualified pest management staff sufficient to ensure effective implementation of pest management programs at all organizational levels.
- t. Establish surveillance programs to assess potential adverse environmental or public health effects from pesticide use and to monitor the health and safety of persons who apply pesticides.
- u. Monitor the use of IPM and reduction of pesticide use in installation pest management programs.
- v. Ensure that Installations:
 - (1) Develop, maintain, annually review, and revise their pest management plans consistent with the program elements in enclosure 4 and AFPMB Technical Information Memorandum (TIM) 18, "Installation Pest Management Guide," February 1987.
 - (2) Implement pest management programs approved by pest management consultants and performed by certified pesticide applicators in accordance with the pest management plan written for each installation.
 - (3) Establish pest management self-help programs for military housing when cost effective and when IPM monitoring indicates a need for a self help program.
 - (4) Have all pesticide applications to DoD installations made only by properly trained and certified personnel in accordance with DoD Plan for the Certification of Pesticide Applicators of Restricted Use Pesticides (reference (d)) or by State-certified applicators.

- (5) Use pesticides in accordance with applicable laws including FIFRA (reference (e)), and the constraints of subsection B.5., above.
 - (6) Use only pesticides that have been approved by a DoD pest management consultant. Consideration should be given to locally purchased pesticides to ensure conformance with State management plans for ground water protection and to facilitate use of recyclable pesticide containers when appropriate pesticides are not available in the Federal supply system. Pesticides may be procured locally if needed for an emergency, if required due to unique local situations, or if required in quantities so small that assignment of an NSN is not practical.
 - (7) Maintain complete daily pesticide application and pest management operations records as required by FIFRA (reference (e)) and 7 U.S.C. 136i1 (reference (f)) or for pest management measures of merit, using DD Form 1532-1 or a computer-generated equivalent. Produce a monthly summary, using DD Form 1532 or computer-generated equivalent, to provide data for regulatory, DoD, Federal, State, or local agency data calls; Component program review and oversight; and Measures of Merit. Installation commanders shall ensure these records are archived after two years for permanent retention.
 - (8) Use pest management contracts when more cost-effective than in-house services. Ensure that firms and their employees performing contract pest management work on DoD installations, and in support of DoD operations overseas, comply with all certification, licensing, and registration requirements of the State or country where the work is performed. Ensure that the technical portions of contracts involving pest management reflect IPM methodology and are reviewed and approved by a DoD pest management consultant before solicitation.
 - (9) Have quality assurance evaluators (QAEs), who have been trained in pest management at DoD-sponsored courses, inspect pest management operations and pesticide applications performed by contractors.
 - (10) Report pest management operations and pesticide applications performed by contractors as required in paragraph E.3.v.(7), above.
4. The Secretary of the Air Force shall maintain a large-area, fixed-wing aerial pesticide application capability to control disease vectors, pest organisms, and vegetation and to treat oil spills in combat areas, on DoD installations, or in response to declared emergencies and shall provide sufficient training for aerial pesticide application air crews and ground support personnel.
 5. The Secretary of the Army, as Executive Agent, shall provide administrative and logistic support, through the Surgeon General, for operation of the AFPMB.

6. The Secretaries of the Military Departments shall ensure that the Surgeons General shall nominate qualified candidates and provide uniformed military entomologists for the directorate positions of the AFPMB and provide technical support for the development, testing, and evaluation of pest management equipment as described below:
 - a. The Surgeon General of the Army shall provide three military entomologists to the AFPMB staff and conduct studies on engineering and durability of pest management equipment.
 - b. The Surgeon General of the Navy shall provide two military entomologists to the AFPMB staff and conduct studies on efficacy and military application of pest management equipment.
 - c. The Surgeon General of the Air Force shall provide two military entomologists to the AFPMB staff.

7. The Deputy Under Secretary of Defense for Environmental Security, through the Armed Forces Pest Management Board, shall:
 - a. Recommend policy, provide scientific advice, and enhance coordination among the DoD Components on all matters related to pest management.
 - b. Serve as the coordinating office for the DoD Undesirable Plant Management Program required by the Federal Noxious Weed Act (FNWA) (reference (g)).
 - c. Review and update DoD Environmental Security Measures of Merit for Pest Management.

PROCEDURES

1. The Components' pest management programs shall include the elements in enclosures 3, 4, 6, 7, and 8.
2. The AFPMB, reestablished by DoD Directive 4715.1 (reference (a)), consisting of a Council and Committee Structure, Directorate, and Defense

Pest Management Information Analysis Center (DPMIAC) shall operate as described in enclosure 5.

INFORMATION REQUIREMENTS

The record-keeping and the reporting requirements prescribed herein are assigned Report Control Symbol DD-A &T 1080. Existing data elements from DoD 8320. 1-M-1 (reference (h)) shall be used in the reporting requirements to the greatest extent possible.

H. EFFECTIVE DATE

This Instruction is effective immediately.

Paul G. Kaminski
Under Secretary of Defense
(Acquisition and Technology)
Enclosures-8

1. References
2. Definitions
3. DoD Environmental Security Measures of Merit for Pest Management
4. DoD Pest Management Program Elements
5. AFPMB Functions, Organization and Management
6. Requirements for Installation Pest Management Programs
7. Procedures for the Acquisition of Pest Management Equipment and Pesticides
8. Content of Installation Pest Management Plans, Suggested Format

(Encl 1)

REFERENCES, continued

- (e) Section 136 et seq. of title 7, United States Code, "Federal Insecticide, Fungicide, and Rodenticide Act 1976 (FIFRA)," as amended
- (f) Section 136i-1 of title 7, United States Code, 1990, Food, Agriculture, Conservation, and Trade Act of 1990"
- (g) Section 10 of title 7 (2801), United States Code, Federal Noxious Weed Act of 1974 et seq., as amended
- (h) DoD 8320. 1-M-1, "Data Element Standardization Procedures," January 1993, authorized by DoD Directive 8320.1, September 26, 1991
- (i) Sections 4321 to 4370a of title 42, United States Code, "National Environmental Policy Act (NEPA) of 1969," as amended
- (j) DoD 4500.54-G, "DoD Foreign Clearance Guide," current edition, authorized by DoD Directive 4500.54, May 1, 1991

- (k) Memorandum of Agreement between the United States Department of Agriculture (USDA) and the Department of Defense for Conduct of Forest Insect and Disease Suppression on Lands Administered by the U.S. Department of Defense, December 1990
- (l) Section 1531 et seq. of title 16, United States Code, “Endangered Species Act of 1973,” as amended
- (m) Department of Defense-United States Department of Agriculture/Animal Plant Health Inspection Service/Animal Damage Control Memorandum of Agreement on Animal Damage Control, April 1990
- (n) Section 1001 et seq. of title 16, United States Code, “Aquatic Nuisance Prevention and Control Act of 1990”
- (o) Executive Order 11850, “Renunciation of Certain Uses in War of Chemical Herbicides and Riot Control Agents,” April 8, 1975
- (p) DoD Directive 5105.18, “DoD Committee Management Program,” January 18, 1990

4150.7 (Encl 2)

DEFINITIONS

1. **Certifying Officials.** Professional DoD pest management personnel designated, in writing by the Components to the Executive Director, AFPMB, who review and certify that qualifications of DoD applicators meet the DoD standards in DoD Plan for the Certification of Pesticide Applicators of Restricted Use Pesticides (reference (d)).
2. **Component Senior Pest Management Consultant.** The professional DoD pest management individuals, designated in writing by the Components to the Executive Director, AFPMB, who are the primary points of contact for the Component's pest management program including technical guidance, management oversight, and information requirements.
3. **Direct Supervision.** Supervision that includes being at the specific location where pest management work is conducted; providing instruction and control; and maintaining a line-of-sight view of the work performed. Certain circumstances may temporarily remove the line-of-sight view of the application of pesticide from the supervisor such as topographic constraints, vegetation constraints, or building structural constraints. Under these temporary circumstances, the supervisor shall be responsible for the actions of the pesticide applicators. (See Uncertified Installation Pesticide Applicator, Definition 13.e., below).
4. **Disease Vector.** Any animal capable of transmitting the causative agent of a human disease; serving as an intermediate or reservoir host of a pathogenic organism; or producing human discomfort or injury, including (but not limited to) mosquitoes, flies,

other insects, ticks, mites, snails, and rodents. It is recognized that certain disease vectors are predominately economic pests that as conditions change may require management or control as a disease vector.

5. Disinsection. The procedure of killing or removing insects from ships or aircraft to prevent their importation into another port or country.
6. Integrated Pest Management (IPM). A planned program, incorporating continuous monitoring, education, record-keeping, and communication to prevent pests and disease vectors from causing unacceptable damage to operations, people, property, materiel, or the environment. IPM uses targeted, sustainable (effective, economical, environmentally sound) methods including education, habitat modification, biological control, genetic control, cultural control, mechanical control, physical control, regulatory control, and where necessary, the judicious use of least-hazardous pesticides.
7. Monitoring. Thorough inspections or surveys conducted on a regular basis to determine the presence and prevalence of pests or disease vectors.
8. Nuisance Pests. Insects, other arthropods, and other organisms that do not cause economic damage or adversely affect human health, but which cause minor annoyance on occasion.
9. On-Site Supervision. Supervision that includes being physically located on the installation, but not necessarily at the specific worksite, during the work performance and being able to be contacted and at the worksite within 30 minutes.
10. Personal Relief. Pest management control efforts made by DoD personnel or their family members at their own expense for control of pests consistent with DoD and Component pest management policy.
11. Pest Management Quality Assurance Evaluator. A quality assurance inspector who is a DoD employee, trained in pest management, who protects the government's interest through on-site performance evaluation of commercial pest management contracts or other contracts that involve the use of pesticides.
12. Pesticide. Any substance or mixture of substances, including biological control agents, that may prevent, destroy, repel, or mitigate pests and are specifically labeled for use by the U.S. Environmental Protection Agency (EPA). Also, any substance or mixture of substances used as a plant regulator, defoliant, desiccant, disinfectant, or biocide. (See Restricted-Use Pesticide, definition 21). Note: The AFPMB does not review or approve disinfectants or biocides.
13. Pesticide Applicator. Any individual who applies pesticides or supervises the use of pesticides by others.
 - a. Certified Pesticide Applicator. Any individual who applies pesticides or supervises the use of pesticides, and who has been authorized to do so by

successfully completing a training program approved by the EPA, followed by formal certification by the Department of Defense or a State, or for OCONUS the provisions of subsection B. 5. of the main body of this Instruction.

- b. DoD-Certified Pesticide Applicators. DoD military or civilian personnel certified in accordance with the DoD Plan for the Certification of Pesticide Applicators of Restricted Use Pesticides (reference (d)).
 - c. Installation Pesticide Applicators. DoD employees or contract personnel whose job responsibilities involve the application of pesticides on DoD installations and property.
 - d. State-Certified Pesticide Applicators. Persons certified in accordance with FIFRA (reference (e)) by a State with an EPA-approved certification plan.
 - e. Uncertified Installation Pesticide Applicators. DoD employees who are not certified under the Department of Defense or State plan during an apprenticeship period not exceeding two years and who must apply pesticides under the supervision of a DoD or State-certified applicator.
- 14. Pest Management. The prevention and control of disease vectors and pests that may adversely affect the DoD mission or military operations; the health and well-being of people; or structures, materiel, or property.
 - 15. Best Management Consultant. Professional DoD pest management personnel located at Component Headquarters, field operating agencies, major commands, facilities engineering field divisions or activities, or area support activities who provide technical and management guidance for the conduct of installation pest management operations. Some pest management consultants may be designated by their Component as certifying officials.
 - 16. Pest Management Coordinator. The individual officially designated by the installation commander to coordinate and oversee the installation pest management program and installation pest management plan. Pest management coordinators shall be certified as pesticide applicators if their job responsibilities require them to apply or supervise the use of pesticides.
 - 17. Pest Management Materiel. Equipment or pesticides used to monitor, prevent, or control pests and disease vectors. Equipment items include, but are not limited to, all pesticide dispersal equipment, traps, nets, and pest-attracting or pest-repelling devices.
 - 18. Pest Management Plan. A long-range, comprehensive installation planning and operational document that establishes the strategy and methods for conducting a safe, effective and environmentally sound integrated pest management program. Written pest management

plans are required as a means of establishing and implementing an installation pest management program.

19. Pests. Arthropods, birds, rodents, nematodes, fungi, bacteria, viruses, algae, snails, marine borers, snakes, weeds, and other organisms (except for human or animal disease-causing organisms) that adversely affect readiness, military operations, or the well-being of personnel and animals; attack or damage real property, supplies, equipment, or vegetation; or are otherwise undesirable.
20. Professional Pest Management Personnel. DoD military officers commissioned in the Medical Service or Biomedical Sciences Corps or DoD civilian personnel with college degrees in biological or agricultural sciences who are in a current assignment that includes pest management responsibilities exercised regularly. DoD civilian employees also shall meet Office of Personnel Management (OPM) qualification standards. Based on assignment, some professional pest management personnel are pest management consultants.
21. Restricted-Use Pesticide. A pesticide that the Administrator of the EPA (in accordance with FIFRA (reference (e))), or a State regulatory agency determines to have the potential to cause unreasonable adverse effects on the environment or human health, when applied in accordance with its directions for use, and therefore requires additional regulatory restrictions.
22. State. Any one of the 50 United States of America; the District of Columbia; the Commonwealths of Puerto Rico, the Northern Marianas, Virgin Islands; and the Territories of Guam and American Samoa.
23. Surveillance. Thorough inspections or surveys made before or after pest management treatments to determine the presence and prevalence of pests or disease vectors.
24. Technical Information Memoranda. Technical guidance prepared by the AFPMB on specific pest management and disease vector control topics. Technical Information Memoranda (TIM) are available from the AFPMB, Forest Glen Section/Walter Reed Army Medical Center, Washington, DC 20307-5001.
25. Training. Formal or informal instruction in one or more subject areas concerning IPM and disease vector control to increase the expertise and measurable competence of pest management personnel in performance of specific IPM and disease vector control skills. Training methods are varied and include workshops, seminars, conferences, symposia, training courses, apprenticeships, interactive models, satellite and video tele-training, correspondence courses, training support packages including video-based products, other distributive products, or materials.

4150.7 (Encl 3)

DoD ENVIRONMENTAL, SECURITY MEASURES OF MERIT FOR PEST MANAGEMENT

1. Measure of Merit 1. Installation Pest Management Plans

By the end of FY 97, 100 percent of DoD installations will have pest management plans prepared, reviewed, and updated annually by pest management professionals;

2. Measure of Merit 2. Pesticide Use Reduction;

By the end of FY 2000, the amount of pesticide applied annually on DoD installations will be reduced by 50% from the FY 93 baseline in pounds of active ingredient. The goal for this measure of merit shall not be obtained by substituting more toxic pesticides that have lower application rates than the pesticide in use.

3. Measure of Merit 3. Installation Pesticide Applicator Certification;

By the end of FY 98, 100 percent of DoD's installation pesticide applicators will be properly certified (either DoD or appropriate State). Direct hire employees have a maximum of two years to become certified after initial employment. Contract employees should have the appropriate State certification when the contract is let.

4150 .7 (Encl 4)

DOD PEST MANAGEMENT PROGRAM ELEMENTS

1. DoD Pest Management Program Elements.

DoD Pest Management Programs shall include the following elements that are described in this enclosure:

- a. Installation Pest Management Plans.
- b. Integrated Pest Management.
- c. Installation Consultative Support, Pest Management Program Reviews, and Audits.
- d. Training and Certification of Pest Management Personnel.
- e. Pesticides and Pest Management Equipment.
- f. Contracting for Commercial Pest Management Services.
- g. Specialized Pest Management Operations.
- h. Pest Management and Disease Vector Control in Military Contingency Operations, Readiness Training Exercises, and Deployments.
- i. Reports and Records.

2. Installation Pest Management Plans.

Each installation shall have a pest management plan as described in enclosure 6. The plan shall list all program objectives, arranged in order of priority, according to potential or actual impact on health, morale, structures, materiel, or property. Installations that have more than 0.5 productive work-years of pest management work shall have their own plan.

Installations with less than 0.5 productive work-years must have an individual plan, or be included in a supporting installation's pest management plan. Professional pest management personnel or certified pesticide applicators shall manage these installation programs.

- a. Component Role. The DoD Components shall ensure that each installation has a pest management plan and that the Component's pest management consultants maintain the program through technical assistance, program review, and program oversight. The Components shall ensure that Installation Commanders:
- (1) Plan and budget for the development and maintenance of the pest management plan.
 - (2) Ensure that qualified personnel develop and update the pest management plan annually.
 - (3) Designate a DoD-certified or State-certified pesticide applicator as the pest management coordinator to implement the plan.
 - (4) Ensure that the pest management coordinator formally coordinates appropriate portions of the pest management plan with the senior medical officer, environmental coordinator, and senior engineering officer and ensure that these individuals sign the cover sheet of the pest management plan.
 - (5) Ensure that appropriate portions of the pest management plan are reviewed by the Natural Resources Program Manager for consistency with the Natural Resources Management Plan
 - (6) Ensure that the pest management coordinator forwards the pest management plan to the cognizant component pest management consultant for review, technical approval, and signature on the cover sheet.
 - (7) Approve and sign the pest management plan for implementation.
 - (8) Ensure implementation of the pest management plan and oversight of the installation pest management program by the pest management coordinator.

- (9) Ensure that all pest management operations performed on the installation, except those for personal relief, are recorded, and ensure that all records are properly maintained and are reported to the cognizant component pest management consultant.
 - b. Content. Pest management plans shall be comprehensive, long-range, narrative documents, as outlined in enclosure 8, and shall:
 - (1) Describe all installation and satellite installation pest management requirements and programs, including those for contracts, natural resources, golf courses, and out leases, and identify minimum pest management staffing requirements.
 - (2) Describe all IPM procedures required to monitor and control pests on the installation.
 - (3) Describe all IPM procedures for surveillance and control of disease vectors.
 - (4) Identify all resources, such as work-years, facilities, and equipment, required to support the installation pest management program.
 - (5) Identify all pesticides, including EPA registration numbers, approved by the respective Component pest management consultant for use in the installation pest management program.
 - (6) Describe all health and safety measures that will be taken to protect both pest management personnel and the general public from pesticide exposure and risk.
 - (7) Identify any planned measures to comply with DoD Memoranda of Agreement with State pesticide regulatory offices relating to use or application of pesticides.
 - (8) Describe pest management functions that can be done more economically through commercial contracts and provide or reference cost comparison analyses.
 - (9) Describe any pest management operation with special environmental considerations such as those that:
 - (a) Use a restricted-use pesticide.
 - (b) Use any pesticide application that may contaminate surface or ground water.

- (c) Include 259 or more contiguous hectares (640 acres) in one pesticide operation.
 - (d) May adversely affect endangered or other protected species or their habitats.
 - (e) Involve aerial application of pesticides.
 - (f) Involve management or control of designated noxious weeds in accordance with 7 U.S.C. 10 (reference (g)) in cooperation with local control efforts.
 - (g) Involve permits for the use of experimental-use pesticides.
- (10) Identify animal control efforts for feral cats, feral dogs, or wildlife.
 - (11) Identify active or potential vector-borne diseases and describe medical department collaboration with local and state agencies or host nations for vector surveillance and control matters.
 - (12) Identify golf course pest management operations.

3. Integrated Pest Management

- a. Background. IPM is the method of choice for DoD pest management and disease vector control. IPM is a sustainable approach to managing pests and controlling disease vectors by combining applicable pest management tools in a way that minimizes economic, health, and environmental risks. IPM uses regular or scheduled monitoring to determine if and when treatments are needed and employs physical, mechanical, cultural, biological, genetic, regulatory chemical, and educational tactics to keep pest numbers low enough to prevent unacceptable damage or impacts. Treatments are not made according to a predetermined schedule; they are made only when and where monitoring has indicated that the pest will cause unacceptable economic, medical, or aesthetic damage. Treatments are chosen and timed to be most effective and least disruptive to natural controls of pests. Least hazardous, but effective, pesticides are used as a last resort.
- b. Process. IPM in the Department of Defense shall be based on seven steps that are routine procedures for addressing each pest problem. These steps are:
 - (1) Identification and assessment of pest or disease vector problems.

- (2) Development of a written management plan or strategy that emphasizes natural controls and non-chemical tactics to deal with pest and disease vector problems.
- (3) Establishment of an action threshold for each pest and disease vector problem to define when corrective action must be implemented.
- (4) Use of a monitoring procedure, such as inspection, trapping, or surveillance, for each pest and disease vector.
- (5) Application of corrective action when a threshold is reached for any pest or disease vector.
- (6) Use of a documentation system to catalogue monitoring information and to document management problems.
- (7) Verification and evaluation procedures to ensure that the IPM program is meeting stated risk reduction measures and that information exists to redesign the IPM plan where required.

4. Installation Consultative Support, Program Reviews and Audits.

- a. Consultative Support. The DoD Components shall ensure that installations receive state-of-the-art technical assistance in IPM.
- b. Command Program Reviews. To ensure adequate oversight of DoD Component Pest Management Programs, DoD Component pest management consultants or designated pest management professionals shall conduct on-site reviews of installation pest management programs at least every 36 months with the following exceptions:
 - (1) Installations requiring less than 0.5 work-years of pest management services shall be reviewed at the discretion of the cognizant pest management consultant.
 - (2) Installations that receive pest management support from another DoD installation shall be reviewed during the review of the supporting installation.
 - (3) Installations with documented pest management problems, such as deficiencies from environmental compliance audits, State inspections, or Federal inspections, should be reviewed annually until the deficiencies are resolved.
 - (4) On-site review requirements can be met by formal program reviews, environmental audits or assistance visits.

c. Environmental Compliance Audits

- (1) The Components shall ensure that pest management consultants or designated pest management professionals are available, on request, to provide technical assistance for the pesticide portion of environmental audits, to provide follow-up assistance to audits, or to further evaluate audit findings.
- (2) The Components shall ensure installations notify the appropriate pest management consultant whenever Federal, State, or local regulators ask to inspect pest management operations. As directed by the Components, pest management consultants shall provide technical coordination services for such inspections consistent with existing Memoranda of Agreement between the Department of Defense and State pesticide regulatory offices relating to use or application of pesticides.

5. Training and Certification of Pest Management Personnel

- a. Personnel Qualifications. Installation pest management programs are comprehensive and include all pest management operations on an installation to support facilities engineering, non-appropriated fund, leased or out-leased activities, contract operations, materiel resources, etc. Therefore, the installation pest management coordinator shall have an appropriate position, educational background, and management skills to implement the plan for the Installation Commander. DoD pesticide applicators shall meet the job qualification standards specified by the OPM. Outside of the United States, DoD pesticide applicators shall comply with subsection B.5. of the main body of this Instruction.
- b. Training and Certification. All installation pest management personnel who apply or supervise the application of pesticides shall be trained and certified within two years of employment in accordance with the DoD Plan for the Certification of Pesticide Applicators of Restricted Use Pesticides, reference (d), or an EPA-approved State certification plan. Personnel who are undergoing apprenticeship training, but are not yet certified, shall apply pesticides only under the direct supervision of a certified pesticide applicator.
 - (1) IPM and pesticide application requirements may vary with installation mission, location, size, and environmental considerations. Some installations may have unique requirements. Training requirements for individual pesticide applicators may vary due to the pest management categories and complexity of the work to be performed. Therefore, the Components' senior pest management consultants shall determine the training and experience necessary to perform the pest management activities within their areas of responsibility. The minimum training for

DoD installation pesticide applicators or contractors shall be that required by the EPA for certification in the applicable pesticide application categories. However, additional training beyond certification may be required due to the circumstances at a particular installation or the nature of the work to be done. These additional pest management training requirements may be fulfilled by successful completion of any DoD, other Federal agency, State, local, or private pest management training, provided the specific DoD requirements would be satisfied by the training.

- (2) Both DoD-certified and State-certified pesticide applicators shall be recertified every 3 years in accordance with the DoD Plan for the Certification of Pesticide Applicators of Restricted Use Pesticides (reference (d)) and FIFRA (reference (e)), respectively. Designated Component-certifying officials may administratively extend individual certifications for up to six months for cause.
- (3) Contractor employees performing pest management work on a DoD installation shall be certified prior to the beginning of the contract under a State plan accepted in the State in which the work is performed. The contractor shall provide evidence of certification in all appropriate pest management categories. Additionally, the contractor shall provide evidence of training and experience equivalent to that determined by the Components as necessary to satisfy the performance requirements for the particular pest management function to be contracted. Successful bidders for contracts shall be afforded the opportunity to receive initial DoD pest management training on a space-available basis at the contractor's expense.
- (4) QAEs, trained in pest management, shall monitor and evaluate contractor performance for pest management services, unless a DoD employee, certified in accordance with the DoD Plan for the Certification of Pesticide Applicators of Restricted Use Pesticides (reference (d)), is available to assist the QAE. If an installation's pest management contract efforts are less than 0.25 work-year, the presence of a trained QAE at the installation is recommended, but is not mandatory.
- (5) The DoD Components shall encourage all eligible professional pest management personnel to obtain appropriate certification in accordance with reference (d) and FIFRA (reference (e)) and to obtain certification from applicable professional boards and professional certifying organizations. Professional pest management personnel shall be certified if their duties include:
 - (a) Making recommendations for the use of pesticides, applying pesticides, or directly supervising the application of pesticides.

- (b) Conducting demonstrations on the proper use and techniques of pesticide application or the supervision of such demonstrations.
 - (c) Conducting field research that includes using or supervising the use of pesticides.
- (6) DoD personnel and family members who apply pesticides under DoD installation self-help programs or for their own relief are exempted from the certification requirement. Requirements for operational and deployable military personnel are described in section 8 of this enclosure, below:

6. Pesticides and Pest Management Equipment

a. Procurement of Pest Management Material

- (1) AFPMB shall approve all introduction, stockage, and deletion of pest management materiel managed by the Defense Logistic Agency (DLA) for use in DoD programs. Enclosure 7 provides specific procedures for AFPMB review and approval of pesticides and equipment.
- (2) The DoD Components shall not procure or acquire pest management materiel that has not been recommended by the AFPMB or approved by the cognizant Component pest management consultant. National Stock Numbers (NSNs) shall not be assigned to pest management materiel for use by the Department of Defense that has not been approved by the AFPMB. Upon approval by the appropriate pest management consultant, pest management materiel may be procured locally if needed for an emergency, if required due to unique local situations, or if required in quantities so small that assignment of an NSN is not practical.

b. Pesticide Storage Facilities. The design of pesticide storage facilities shall comply with standards described in "Military Handbook, Design of Pest Management Facilities," November 1991. Existing facilities shall comply with all applicable regulatory standards and shall, where feasible, be modified to meet the standards for new pesticide storage facilities.

c. Pesticide Disposal. Installation commanders shall ensure that installation pest management programs are managed to ensure pesticides do not become hazardous wastes. The installation pest management coordinator shall ensure that excess EPA-registered pesticides are either returned to the DLA Materials Return Program, transferred to a DoD installation able to use the materiel, or transferred to the servicing Defense Reutilization and Marketing Office. The appropriate DoD

pest management consultant shall, if requested, provide assistance in identifying installations where usable pesticides could be used. When the EPA publishes a proposed pesticide regulatory action involving pesticide label suspension or cancellation that affects the Department of Defense, the Components and installations shall comply with administrative procedures developed between the DLA and AFPMB. The Components shall use the guidance in AFPMB TIM 21, "Pesticide Disposal for Pest Control Shops," October 1986, for pesticide disposal.

- d. **Pesticide Safety.** To ensure the safe use of pesticides, DoD personnel shall handle and apply pesticides in accordance with the product's label directions and AFPMB TIM 14, "Personal Protective Equipment for Pest Management Personnel," May 1992; TIM 15, "Pesticide Spill Prevention and Management," June 1992; TIM 16, "Pesticide Fires: Prevention, Control and Cleanup," January 1981; and TIM 21, "Pesticide Disposal Guide for Pest Control Shops," October 1986. DoD policy prohibits construction of buildings with heating, ventilation and air conditioning (HVAC) ducts located in and below the floor to prevent accidental contamination of the ducts with termiticides. Similarly, DoD policy prohibits post-construction treatment of structures with HVAC ducts without a waiver from the Component pest management consultant.
- e. **Electrically Operated Devices.** It is DoD policy to not use electromagnetic exclusion or control devices, ultrasonic repellent or control devices, and outdoor devices for electrocuting flying insects on DoD installations, except as noted in AFPMB TIM 25, "Devices for Electrocutation of Flying Insects," February 1996. However, indoor devices for electrocuting flying insects can be used when selected, purchased, located, and used in accordance with AFPMB Technical Information Memorandum 25. Pest surveillance traps and monitoring equipment, such as non-electrocuting mosquito light traps, shall be used as integral tools for IPM programs.
- f. **Paints and Coatings Containing Pesticides and other Biocides.** DoD policy prohibits use of paints containing insecticides on DoD property. This guidance applies to both interior or exterior paints that contain insecticides intended for application to broad structural surfaces such as walls, ceilings, and siding. It also applies to insecticides formulated and labeled for use as paint additives. Paints containing fungicides as mildew inhibitors may be used when application directions specify no special restrictions due to the fungicide. Approved marine anti-fouling compounds or coatings may be applied to protect surfaces of watercraft.
- g. **Preventive or Scheduled Pesticide Treatments.** DoD policy prohibits the use of regularly scheduled, periodic pesticide applications except in situations where the installation pest management plan clearly documents that no other technology or approach is available to protect personnel or property of high value. Installations shall not use preventive pesticide treatments unless the appropriate pest management consultant has given approval based upon current surveillance

information or records documenting past disease vector or pest problems that require this approach.

7. Pest Management Contracting

- a. Background. The Department of Defense shall use pest management contracts when cost-effective or when advantageous for non-routine, large-scale, or emergency services, especially when specialized equipment or expertise is needed. Contractors shall comply with State regulatory requirements in the State where the work will be performed regarding certification, licensing and registration of pest management companies and their employees. Outside of the United States, contractors shall comply with section B.5. of the main body of this Instruction.

- b. Review and Approval. Pest management consultants shall review and approve contract documents for pest management operations including augmentation contracts to ensure that appropriate pest management standards and IPM are specified. Contracting offices shall award augmentation contracts only when the respective pest management consultant has verified that the contract will provide necessary services beyond the capability of any in-house staff. The Components shall encourage installations that lack expertise in pest management to request the services of a DoD pest management consultant to develop the technical portions of pest management contracts in accordance with DoD/AFPMB Guideline Performance Work Statement (GPWS) for Contract Pest Control, July 1986. Pest management consultants shall act as technical consultants during the performance of contracted work.

- c. Quality Assurance.
 - (1) The Components shall ensure that QAEs, who inspect the performance of contractor-provided pest management services, are trained in pest management.
 - (2) Installation Commanders shall base pest management QAE staffing decisions on the following factors:
 - (a) The number of pest management operations requiring 100 percent inspection.
 - (b) The number of different functions being performed simultaneously.
 - (c) The scope of the contract including required productive work--years.
 - (d) The level of monitoring or surveillance required for each operation.

8. Specialized Pest Management Operations

- a. **Aerial Application of Pesticides.** Documentation for aerial application projects shall be in accordance with DoD and Component environmental requirements including compliance with the requirements of the NEPA (reference (I)). The DoD Components shall ensure that a designated pest management consultant at the major command level or higher, who is certified in the aerial application pest control category, approves all proposed pest management projects that involve the aerial application of pesticides. Approval shall be obtained before aerial application operations commence. DoD Component pest management consultants shall collaborate, as appropriate, with the 910th Airlift Wing (Air Force Reserve) during the review and approval process for aerial spray projects to be completed by the 910th. Installation commanders shall ensure that installation personnel update documentation for project approval if subsequent aerial application operations are planned.
- b. **Disinsection of Military Aircraft.** DoD personnel shall disinsect military aircraft for disease vectors and agricultural pests only when:
 - (1) Required by a foreign nation as a prerequisite to entry as specified in the DoD Foreign Clearance Guide (reference (j)).
 - (2) Mandated by the U.S. Department of Health and Human Services or the U.S. Department of Agriculture.
 - (3) Directed by a command-level or higher authority who, consistent with Joint Service regulation, "Quarantine Regulations of the Armed Forces," January 24, 1992, has determined that the point of embarkment has active vector-borne disease.
 - (4) No passengers are on board (except when mandated by the DoD Foreign Clearance Guide (reference (j))).
- c. **Forest Pests.** The Components shall cooperate with the USDA, Forest Service, on applicable pest management programs including annual USDA funding for forest insect and disease suppression projects on DoD-controlled land in accordance with the MOA between the USDA and the Department of Defense (reference (k)) and Joint Service Technical Manual, "Weed Control and Plant Growth Regulation," May 24, 1989.

- d. Medically Important Pests. The DoD Components shall ensure that responsibilities for surveillance and control of medically important insects and other arthropods are clearly delineated in installation pest management plans and operational plans. Specific guidance on the surveillance and control of Lyme disease vectors is found in AFPMB TIM 26, “Lyme Disease-Vector Surveillance and Control,” March 1990.
 - e. Nuisance Pests. Installation pest management personnel shall not apply pesticides or other control procedures for nuisance pests unless such measures have been approved by the appropriate pest management consultant.
 - f. Pesticide Applications in the Range of Endangered Species. The Components shall comply with regulations, including 16 U.S.C. 1531 et seq. (reference (1)), requiring Federal Agencies to ensure their actions will not jeopardize endangered or threatened species (ETS) or associated habitat. Installation Commanders shall ensure that their installation pest management plans identify areas within their installation that contain ETS and that personnel using pesticides on the installation know the potential impact that pesticide applications could have on ETS. DoD pest management plans shall comply with the ETS protection efforts of the U.S. Fish and Wildlife Service (FWS) and FWS limitations on pesticide usage. To prevent consultations before every pesticide application or operation in the habitat of an ETS, pertinent sections of installation pest management plan shall be submitted to the regional FWS office for review and comment. After initial coordination, only changes to the plan shall be forwarded to the FWS for review. Further coordination with the FWS is not required unless the conditions of the pesticide applications are changed as indicated by county bulletins, pesticide labels, ETS status, or land use. If the FWS arrives at a finding of “may affect” the ETS, and the pesticide application is considered a firm DoD requirement by the installation commander and cognizant pest management professional, the installation commander shall request a formal consultation with the FWS. OCONUS installations shall comply with section B.5. of the main body of this Instruction.
 - g. Pests in Health Care Facilities. Components shall ensure that pest management in health care facilities are conducted according to the guidance in AFPMB TIM 20, “Pest Management in Health Care Facilities,” October 1989.
 - h. Pest Management in Child Care and Food Service Facilities. DoD Components shall ensure that responsibilities for surveillance and control of insects and other arthropods in child care and Food Service are clearly delineated in installation pest management plans and operations.
- I. Pest Management in Military Quarters and Housing
- (1) Background

Installation commanders shall ensure that residents of military quarters and housing practice good sanitation and correct minor nuisance pest problems. Quarters and housing occupants are responsible for controlling pests such as cockroaches, household infesting ants, and mice not originating in other quarters. Control of medically important pests, including venomous arthropods, which could affect human health, and structural pests which could damage property, shall not be an occupant's responsibility.

(2) Installation Role

- (a) Installation Commanders shall ensure that installation pest management services are provided in military housing only when the pest threatens Government property or the occupants' health, and the occupants have been unable to control the pests through self-help efforts. Exceptions shall only be made with the concurrence of the appropriate pest management consultant.
- (b) Installation commanders may allow residents of military housing to contract with licensed pest management companies at their own expense.

(3) Self-Help Program

- (a) The DoD Components shall establish installation self-help pest management for military housing when cost-effective and when IPM monitoring indicates the need for a self-help program. Self-help pest management materials issued to occupants of military housing may include cockroach and ant baits and/or traps, mouse traps, glue boards, and general-use pesticide aerosols with crack and crevice devices as recommended by the cognizant pest management consultant. Liquid pesticides should not be issued. The office designated to manage the installation's self-help program should coordinate procurement and storage of pest management materials with the installation pest management shop, hazardous material manager, and the DLA Supply Center.
 - (b) Installation Commanders shall ensure that self-help personnel provide written instructions and appropriate precautions, beyond those on pesticide labels, to military quarters' and housing occupants to ensure proper pesticide application and safety.
 - (c) If pesticides are issued to occupants, records must be maintained as described in subparagraph E.3.v.(7) of the main body of this Instruction. These records should enable installation self-help personnel to validate the occupant's attempts to control target pests before providing installation pest management services. Pest management consultants should review these records during annual reviews to evaluate the efficiency of the installation's self-help program.
- j. Pest Management at Closing Installations. Because pests may cause serious damage to unused facilities, the Components shall ensure that pest management

consultants provide guidance needed to protect all closing or closed facilities from pests from the beginning of deactivation until property disposal.

- k. Quarantinable Pests. The Joint Service, "Quarantine Regulations of the Armed Forces," January 24, 1992, contains policy for quarantine regulations applicable to the Armed Forces.
- l. Stored Products Pests. The DoD Components shall implement measures to minimize insect and vertebrate pest damage to subsistence, clothing and textiles, medical, and other infestible stored materiel according to AFPMB TIM 27, "Stored Products Pest Monitoring Techniques," June 1992. The Components shall ensure fumigation of subsistence stocks follows the guidance provided in AFPMB TIM 11, "Hydrogen Phosphide Fumigation with Aluminum Phosphide," February 1987. Guidance for protecting Meal, Ready-to Eat Rations is available from Component pest management consultants. DLA Regulation 4145.31, "Stored Product Pest Management Program," June 8, 1990, provides pest management guidance on infestible stored products.
- m. Turf and Ornamental Pests. Installation Commanders shall implement measures to prevent unacceptable damage to shade trees, ornamental plantiny," August 16, 1988.

2. Authorizes the publication of DoD 4150.7-M, "DoD Pest Management Training and Certification," in accordance with reference (c).

3. Authorizes the publication of DoD 4150.7-P, "DoD Plan for the Certification of Pesticide Applicators," in accordance with reference (c). 4. Designates the Secretary of the Army as the DoD Executive Agent for the Armed Forces Pest Management Board (AFPMB).

B. APPLICABILITY AND SCOPE

This Instruction:

- 1. Applies to the Office of the Secretary of Defense (OSD), the Military Departments (including the Coast Guard when it is operating as a Military Service

cluding the Coast Guard when it is operating as a Military Service in the Navy), the

nified Combatant Commands, the Inspector General of the Department of
Defense, the Defense Agencies, and the DoD Field Activities (hereafter

onents”). The term “Military Services,” as used herein, refers to the Army, the

e Marine Corps.

2. Applies to all DoD operations, activities, and installations worldwide including appropriated fund activities; non-appropriated fund activities; coneracted activities; and Government-owned, contractor-racted activities; and Government-owned, contractor-operated facilities.

3. Applies to all DoD buildings, structures, lands, public works, equipment, aircraft, vessels, and vehicles.

4. Applies to all DoD vector control and pest management operations performed worldwide during peacetime, wartime, and military deployments including rhose done by contract.

hose done by contract.

5. Outside the Continental United States (OCONUS), applies consistent with applicable international agreements, Status of Forces Agreements, Final(Governing Governing Standards (FGS) issued for the host nations, or where no such FGS have been issued, the criteria in the Overseas Environmental Baseline Guidance Document.

6. Does not apply to:

a. The civil works function of the AGmy Corps of Engineers.
my Corps of Engineers.

b. State-owned or State-operated (funded) installations or facilities that the National Guard uses part-time or full-timm.

C. DEFINITIONS

Terms used in this Instruction are defined in enclosure 2.

D. POLICY

It is DoD Policy under DoD Directive 4715.1 (refere ce (a)) to:
ce (a)) to:

environmentally sound integrated pest management (IPM) programs to prevent or control

and disease vectors that may adversely impact readiness or military operations by affecting the health of personnel or damaging structures, materiel, or property.

2. Ensure DoD pest management programs achieve, maintain, and monitor compliance with all applicable Executive Orders and applicable Federal, State, and local statutory and regulatory requirements.

regulatory requirements.

strategies, and techniques in all aspects of DoD and Component vector control and pest management planning, training, and operations including installation pest management plans and other written guidance to reduce pesticide risk and prevent pollution.

E. RESPONSIBILITIES

for Acquisition and Technology, through the Deputy Under Secretary of Defense (Environmental Security) (DUSD(ES)), shall:

- a. Oversee the implementation of this Instruction and represent the Secretary the Secretary of Defense for both internal and interagency matters on the DoD Pest Management Program.
 - b. Provide operational direction and supervision to the AFPMB.
 - c. Provide policy guidance and coordination for the DoD Pest Management Program.
 - d. Maintain and enforce the DoD Plan for the Certification of Pesticide Applicators of Restricted Use Pesticides (reference (d)).
 - e. Monitor compliance with this Instruction, including the Components' use struction, including the Components' use of the DoD Pest Management Program Measures of Merit (enclosure 3).
 - f. Coordinate pest management actions with the Assistant Secretary of Defense for Health Affairs when human health is an issue.
2. The Director of Defense Research and Engineering, under tse Under Secretary of

e Under Secretary of Defense for Acquisition and Technology, shall, in coordination with

arch, development, and transfer of technology to support DoD pest management requirements.

3. The Heads of the DoD Components shall:

:

- a. Establish and maintain programs that conform to the policy, procedures, and requirements specified in this Instruction including the program elements in enclosure 4.
- b. Emphasize IPM techniques in their pest management programs as a means to reduce pesticide risk and prevent pollution.
- c. Exercise oversight and review of installation pest management programs from the Components' major command and headquarters level.
- d. Maintain accurate and complete reporting and record-keeping of pest management operations and pesticide use.
- e. Ensure that actions taken under the policy in section D, above, are consistent with DoD Directive 4715.1 (reference (a)).
- f. Implement programs to achieve, maintain, and monitor compliance

tatutory and regulatory requirements for pest management.

nders of deployed forces enforce the use of all appropriate personal protection measures,

ents and bed nets, to protect their troops from vector-borne diseases and rodent and arthropod health threats.

h. Ensure that any pesticide applications, excluding arthropod skin and clothing repellents, performed during military operations are recorded using DD Form 1532-1, "Pest Management Maintenance Report," or a Management Maintenance Report," or a computer-generated equivalent. The DoD Components shall establish a method to archive these records for permanent retention.

i. Ensure the implementation of IPM in Component pest management programs, operations, regulations, publications, pest management training, and pesticide applicator certification programs.

j. Coordinate pest management actions, as appropriate, with the Assistant Secretary of Defense for Health Affairs, with State and local governments, and with host-nation agencies involved with pest management when human health is an issue.

k. Ensure that the Component's DoD pest management consaining for limited site application of pre-selected pesticides during military operations or deployments are exempt from the certification requirement. However, these individuals shall be fully trained, including hands-on training for these specific applications. The Military Services shall develop specific site training programs for these individuals and a means to document who has received this training. At a minimum, the training shall include the safe use and proper application of the limited, pre-selected pesticides for the specific site for which these individuals are trained.

c. Contractors who apply pesticides in these situations shall comply with the policy in subsection B.5., in the main body of the Instruction.

d. The Military Services shall ensure that pesticide use in these situations is recorded as stated in paragraph E.3.d. of the main body of this Instruction.

10. Reports and Records

a. The DoD Components shall ensure that all DoD installations maintain complete daily records of pesticide applications and non-chemical pest management operations using DD Form 1532-1 or a computer-generated equivalent as stated in section E.3.v.(7) of the main body of this Instruction. These records shall account for all shop operations and shall provide a historical record of pest management operations and pesticide applications for each building, structure, or outdoor site.

- (1) Records shall include information on kinds, amounts, uses, dates, places of application, and applicators names and certification numbers.
- (2) The record shall include all pesticide applications performed on the installation, including work done on golf courses, by non-appropriated fund activities, by contract services, and as part of out leases and land management and forestry programs, as well as work performed by installation pest management shops.
 - b. DD Form 1532, "Pest Management Report," or an equivalent computer product, shall be produced monthly using DD Form 1532-1 information and shall be forwarded at least quarterly to major command headquarters for review and oversight.
 - c. Pest management consultants shall use this data to evaluate the efficiency of the overall installation pest management program and pest management operations.
 - d. Pesticides applied by installation personnel for their own relief are excluded from the recordkeeping requirement.

4150.7 (Encl 5)

AFPMB FUNCTIONS, ORGANIZATION AND MANAGEMENT

1. Functions. The purpose of the AFPMB is to recommend policy, provide scientific advice, and provide coordination among the DoD Components on all matters related to pest management. The AFPMB shall:
 - a. Develop and recommend policy to the Under Secretary of Defense (Acquisition & Technology) for the DoD Pest Management Program.
 - b. Coordinate pest management activities in the Department of Defense.
 - c. Develop, issue, and maintain manuals and other guidance necessary to implement the technical requirements of FIFRA (reference (e)).
 - d. Implement the DoD Plan for Certification of Pesticide Applicators of Restricted Use Pesticides (reference (d)) and develop comprehensive training guidance for DoD pest management personnel.
 - e. Coordinate DoD contingency disease vector and pest management with the Chairman of the Joint Chiefs of Staff, the Combatant Commands and other contingency planning organizations.

- f. Serve as an advisory body to the DoD Components and provide timely scientific and professional pest management advice.
- g. Develop and distribute technical information and guidance on pest management to the Components by means of Technical Information Memoranda, Disease Vector Ecology Profiles and similar publications.
- h. Review and approve any introduction, stockage, and deletion of pest management materiel by the DLA in the DoD supply system. The AFPMB does not review or approve disinfectants or biocides.
- i. Operate the DPMIAC.
- j. Coordinate and develop requirements for pest management research, development, and testing in the Department of Defense:
 - (1) Provide technical coordination for the annual review of USDA pest management research of interest to the Department of Defense;
 - (2) Provide research requirements and recommendations to the Director of Defense Research Engineering, or designee, and to other organizations performing pest management research, development, and testing for the Department of Defense.
- k. Establish committees that shall function in accordance with DoD Directive 5105.18 (reference (p)) to facilitate the performance of AFPMB functions.
 - l. Support the Defense Environmental Security Council and the Environmental Safety and Occupational Health Policy Board in the area of pest management.
- m. Perform other functions as assigned.
 - 2. Organization and Management. The AFPMB, a joint DoD activity comprised of the Council and Committee structure, the Directorate, and the DPMIAC, shall be organized and managed as follows:
 - a. The Council, a part-time approval, coordination and advisory body of the AFPMB, shall be composed of 13 voting members appointed from the Military Departments and DLA. Each Military Department may appoint up to four members. The DLA may appoint one member. Members shall be professional pest management personnel whenever possible. Other DoD Components with operational pest management programs may

request membership. Other DoD Components or Federal Agencies may be invited by the Council to participate in Council meetings when matters of common interest are under consideration. However, invited participants may not vote.

- (1) The Council shall elect from among its membership a chair of the AFPMB and a vice-chair who will serve in the absence of the chair. They shall serve 2-year terms that may be extended by reelection. The chair shall preside over meetings of the Council and the Board; establish standing and ad hoc committees and task groups to assist the Council in performing its functions; and call at least three meetings annually to carry out the mission of the Board.
 - (2) The Council may develop procedural rules necessary to accomplish its mission.
- b. The Directorate shall be the full-time administrative and operational body of the Board. It shall be composed of an Executive Director; an Assistant Executive Director; a Contingency Liaison Officer (CLO); a Research Liaison Officer (RLO); the Chief, Defense Pest Management Information Analysis Center; and any professional, technical, and clerical personnel necessary for its operation and administration.
- (1) The Executive Director shall be an active duty military medical entomology officer, preferably in the grade O-6, nominated by the respective Surgeon General of the Military Departments, and appointed by the DUSD(ES) for a period of four years. When practical, appointees shall rotate in the order of the Army, Navy, and Air Force. The Executive Director shall supervise the Directorate, provide assistance to the Council as required, and perform other tasks the DUSD(ES) may assign. The Executive Director shall also serve as the Director of Defense Pest Management, Office of the DUSD(ES).
 - (2) The Assistant Executive Director shall be an active duty military medical entomology officer, with a minimum grade of O-5. Length of tour, nomination, and appointment procedures shall be the same as for the Executive Director. The Assistant Executive Director shall serve in the absence of the Executive Director.

- (3) The CLO shall be an appropriately trained active duty medical entomology officer, with a minimum grade of O-5 and extensive field and staff experience. Length of tour, nomination, and appointment procedures shall be the same as for the Executive Director. The CLO shall serve as the principal contact between the AFPMB and the Chairman of the Joint Chiefs of Staff, Unified Combatant Commands, and Component service organizations lacking a staff medical entomologist. The CLO shall support the contingency, readiness, and deployment functions of the AFPMB. The CLO shall provide updated information on specific vector-borne disease threats in any country in the world in coordination with the DPMIAC, shall assist in the development of appropriate sections of operational plan medical annexes, and shall identify resources for surveillance and control of disease vectors for specific operations.
- (4) The RLO shall be an active duty military medical entomology officer, with a minimum grade of O-5, with experience in both research and administration. The length of tour, nomination, and appointment procedures shall be the same as for the Executive Director. The RLO shall coordinate the research and evaluation function of the AFPMB and shall serve as the principal contact between the AFPMB and other Federal agencies' pest management research offices.
- (5) The DPMIAC shall be the center for collection and analysis of scientific and technical integrated pest management and disease vector information. It shall, upon request, distribute this information to the DoD Components, the Chairman of the Joint Chiefs of Staff and Combatant Commands. It shall also assist committees, task groups, and the AFPMB Council; provide resource material; and develop pest management TIMS, bulletins, and other guidance for the DoD Components, the Chairman of the Joint Chiefs of Staff and Combatant Commands. Each of the Military Departments shall provide one medical entomology officer to the staff of the DPMIAC. Medical entomology consultants of the three Military Departments shall nominate personnel for approval by the Executive Director.

4150.7 (Encl 6)

REQUIREMENTS FOR INSTALLATION PEST MANAGEMENT PROGRAMS

TABLE

| |
|--|
| Pest Management Requirement (Productive Work-years) |
| Installation Pest Management Plan Requirement |
| On-site Program Review Requirement |
| Less than 0.49 |
| Individual plan is not required, but requirement shall be included in supporting installation's pest management plan |
| Review interval determined by the pest management consultant that reviews the supporting installation's pest management plan |
| 0.50 or more |
| Individual pest management plan is required |
| At least every 36 months |

END OF TABLE

Figure 1-1

4150.7 (Encl 7)

PROCEDURES FOR THE ACQUISITION OF PEST MANAGEMENT EQUIPMENT AND PESTICIDES

1. The AFPMB shall:
 - a. Operate as the single point of contact for, and maintain liaison with, other government agencies in all professional and technical matters involving pest management materiel.
 - b. Coordinate the introduction and standardization of pest management materiel.
 - c. Continually evaluate pest management materiel that is in the Federal supply system.
 - d. Coordinate with the appropriate commodity integrated material managers (CIMMs) for the introduction, revision, and deletion of pest management materiel.

2. The appropriate CIMM shall submit cataloging actions only for pest management materiel that has been approved by the AFPMB. Unapproved materiel shall be referred to the AFPMB for consideration.
3. The DoD Components shall request approval of stocking of pest management materiel through command channels to the AFPMB. Such requests shall include the necessary technical and supply management information. Once approved by the AFPMB, the request shall be given to the CIMM for cataloging action. Proposals from the Components recommending revision to and deletion of pest management materiel from the supply system shall be submitted to the AFPMB in the same manner. When pest management materiel is decentralized for procurement from local sources, procuring activities shall ensure that item identification changes are proposed when such materiel requires changes to the Federal item identification. Proposed item identification changes shall be processed through the AFPMB to the CIMM. When items no longer are available for procurement, procurement activities shall inform the AFPMB so that deletion and replacement recommendations, when appropriate, can be made by the AFPMB through the appropriate CIMM.
4. Except as specifically authorized in this Instruction, the Components may not procure or acquire pest management materiel that has not been approved by the AFPMB. NSNs will not be assigned to pest management materiel for DoD use that has not been approved by the AFPMB.
5. When approved by the pest management consultant concerned, pest management materiel may be procured locally if needed for an emergency, required due to unique local situations, or used in quantities so small that assignment of an NSN is not feasible. Installations shall make every effort to use pest management materiel in the DoD Supply System before requesting local purchase authority. In answer to AFPMB data calls, the Components' shall provide the AFPMB with memoranda listing, all locally procured pest management materiel they have approved. The listings shall include the amount purchased, the proposed use, and any other information needed by the AFPMB. The AFPMB shall monitor the appropriateness of locally procured pest management materiel for use in the Department of Defense. When justified, the AFPMB shall request that an NSN be assigned to pest management materiel.
6. The AFPMB shall base its decisions upon data from all available sources. When additional testing and evaluation are required, the U.S. Navy Bureau of Medicine and Surgery shall provide data from studies on user efficacy and military application of commercial equipment, and the U.S. Army Medical Department shall provide data from studies on pest management equipment engineering and durability.

4150.7 (Encl 8)

CONTENT OF INSTALLATION PEST MANAGEMENT PLANS, SUGGESTED FORMAT

Installation pest management plans shall include the following basic elements listed below as the elements apply to each individual installation:

1. Cover Sheet
 - a. Title
 - b. Installation Name
 - c. Approval and Technical Review (signatures):
 - (1) Installation Pest Management Coordinator
 - (2) Installation Environmental Coordinator
 - (3) Installation Medical Officer
 - (4) Senior Installation Engineer
 - (5) Component Pest Management Consultants
 - (6) Installation Commander
 - d. Date of Last Annual Review
 - e. Date of Last On-Site Review
2. Executive Summary
3. Installation Implementation Authority (Installation instruction, standard operating procedure, (etc.), if applicable.
4. Introduction
 - a. Objective of the pest management plan
 - b. Installation description and mission
 - c. Responsibilities for conduct of the pest management programs
5. Pest Management Requirements and Strategies for Applicable Pest/Disease Vector Categories (for each pest / disease vector category describe the IPM strategy as outlined on page 6-6.)
 - a. Disease Vectors and Other Health-Related Pests
 - b. General Household and Nuisance Pests
 - c. Structural Pests
 - d. Weed Control
 - e. Stored Products Pests
 - f. Pests of Ornamental Plants and Turf
 - g. Pests of Natural Resources

- h. Golf Course Pests
 - i. Miscellaneous Pests
 - j. Vertebrate Pests
 - k. Other categories
6. Administration
- a. Job Orders
 - b. Contracts
 - c. Inter-Service Support Agreements
 - d. Outleases
 - e. Resources (Current and Proposed)
 - (1) Funding
 - (2) Staffing
 - (3) Materials (Pesticides, Equipment, Supplies, etc.)
 - (4) Facilities
 - f. Reports and Records
 - g. Training Plans
 - h. Coordination with Food Service Managers, Maintenance Personnel, etc.
 - i. Termite Inspection Plan
7. Health and Safety Measures
- a. Requirements
 - b. Methods to Reduce Potential Hazards to:
 - (1) Pest Management Personnel
 - (2) Installation Personnel (including housing occupants)
 - (3) Public
 - c. Safety and Health Measures Associated with the Pest Management/Control Shops.
 - d. Safety and Health Measures Associated with Pest Management Vehicles
8. Public Laws and Regulations
9. Coordination with other Organizations and Agencies
10. Measures for Compliance with Memorandum of Understanding with State Pesticide Regulatory Office(s)
11. Pest Management Operations with Special Environmental Considerations

- a. Operations using Restricted Use Pesticides
 - b. Operations with Potential to Contaminate Surface or Groundwater
 - c. Operations more than 640 Acres.
 - d. Operations in Areas with Endangered or Protected Species
 - e. Operations involving Aerial Application
 - f. Operations involving Designated Noxious Weeds
 - g. Operations involving Experimental-Use Permits
 - h. Operations involving Environmentally Sensitive Areas
12. Other Pest Management Plan Issues
- a. Applicable Pollution Control Projects
 - b. Applicable Pollution Abatement Procedures
 - c. Pesticides Sold in Commissaries and Exchanges
13. Pest Management Plan for Services Provided to other Activities or Installations
- a. On Installation
 - b. Off Installation
14. Annexes
- a. Installation Map
 - b. Annual Pesticide Procurement Approval Obtained from the Cognizant Component Pest Management Consultant prior to Procurement of Pesticides
 - c. Pesticide Inventory including pesticide name, manufacturer, unit of issue, concentration, quantity, NSN, etc.
 - d. Pesticide Labels, Material Safety Data Sheets, and Consumer Protection Information Sheets for Preservative Treated Wood Products
 - e. Operational Control and Maintenance Records from Previous Years
 - f. Applicable Instructions and Procedures
 - g. Contracting Standards, Specifications, and Statements of Work
 - h. Manpower Surveys
 - i. Shop Equipment and Sources
 - j. List of Safety Items and Personal Protective Equipment
 - k. Technical Information
 - l. Spill Plan and Pesticide Clean-up Guidance
 - m. Industrial Hygiene Surveys of Pest Management Shop
 - n. Cost Comparison Analyses

PM PLAN OR STRATEGY OUTLINE

- 1. Pest or Disease Vector Problem

- a. Target life stage or stages
 - b. Reason this pest or disease vector is a problem
2. Ongoing Monitoring Plan
- a. Responsible organization or official
 - b. Techniques and procedures
 - c. Location or locations (specify)
 - d. Schedule
 - e. Threshold for management and/or control
3. IPM Strategy and Methods
- a. Responsible organization or official
 - b. Nonchemical controls (biological, cultural, mechanical, etc.)
 - (1) Techniques or procedures
 - (2) Method of application, if applicable
 - (3) Sites/locations to receive non-chemical control
 - c. Pesticide Applications
 - (1) Common name
 - (2) EPA Registration number
 - (3) Formulation
 - (4) Percent of active ingredient
 - (5) Source or NSN
 - (6) Application concentration
 - (a) Finished formulation %
 - (b) Diluent
 - (c) Application rate
 - (d) Method of application
 - (7) Location or locations to be treated. For each specific site include units (such as square feet or acres) treated, number of applications, schedule of treatment, and climate or weather constraints.
4. Evaluation Procedures and Standards Used to Verify the IPM Strategy such as Acceptable Quality Levels (AQL) for in-house functions or Maximum Defect Rates (MADR) for contractor performance.
5. Education Necessary for Installation Personnel to Support the IPM Strategy
6. Sensitive Areas (with respect to each pest or disease vector) to be:

- a. Avoided by either nonchemical or chemical controls.
- b. Treated with caution.
- 7. Special Health and Safety Measures Required.
- 8. Control Procedures that Require Pest Management Consultant Approval or Coordination.
- 9. Other Procedures such as Emergency Requirements for Control of Vector-borne Disease.
- 10. Manpower Requirement for IPM Strategy (include method used to identify the personnel required).

Frequently Asked Questions Concerning the DoD Pest Management Measures of Merit

Q: Should these measures be applied to Reserve and National Guard installations?

A: Yes, all DoD installations should be included in the data submitted by the Components.

Q: How do you determine whether an installation is large enough to need a pest management plan?

A: Guidance on this issue is contained in DoD Directive 4150.7. Basically, any installation that has greater than one half a person year of pest management work should have a separate plan. Installations that have less than one half a person year should have their pest management requirements included in the pest management plan of the installation that provides pest management support.

Q: Do contract employees that perform pest control at a Government Owned Contractor Operated installations have a two year "grace period" to become certified like DoD employees?

A: No, all contracted pest control should be done by certified personnel. This requirement should be included in the language of all new contracts and when possible, should be added to existing contracts.

Q: Do Guard personnel who apply pesticides as part of their civilian duties (and who normally hold State certification) but not part of their military duties have a two year "grace period" to become certified?

A: Yes, all direct-hire employees who do pest control on DoD installations, whether they are training for DoD or State certification, have a maximum of two years to become certified after initial employment.

Q: To help achieve the DoD pesticide use reduction goal, can more toxic pesticides, applied at lower rates, be substituted for less toxic pesticides?

A: No. because this might lead to *higher risk*, more toxic pesticides may not be substituted to help achieve this goal.

Q: Should disinfectants used to control micro-organisms in cooling systems be counted in the annual pesticide use?

A: No, only pesticides applied or monitored by installation pest control personnel should be included. General use pesticides like disinfectants or repellents applied for personal relief are exempt from this requirement.

Q: Should chemicals considered by the EPA as "biopesticides" be included in annual pesticide use.

A: Biopesticides are normally the least toxic chemical control for a given pest. Ideally, we would prefer not to count biopesticides. We are working with the EPA to compile a list of biopesticides which we will publish when finalized. Until that list distributed, include biopesticides in the annual pesticide use.

ACC EARTH DAY ORGANIZER'S GUIDE

**“Save Our Habitat Earth--Security for the Earth:
the Military and the Environment.”**

(Theme and program emphasis for international Earth Day activities, 1996-2000.)

Produced by ACC CES/ESC (1996)

National Coordinating Groups that provide Earth Day information and linkages:

Earth Day USA
PO Box 470
Peterborough, NH 03458
(603) 924-7720 (phone)
(603) 924-7855 (fax)

Earth Day Resources
116 New Montgomery St., Suite 530
San Francisco, CA 94105
(800) 727-8619 or
(415) 495-5987 (phone)

Earth Day Network
(619) 272-7270 (phone)

Plus numerous local Earth Day groups

This is a user's guide to help ACC bases plan, produce, & publicize
an Earth Day celebration. For more information contact:

Tim Blevins, ACC CES/ESC
129 Andrews Street, Suite 102
Langley AFB, VA 23665-2769
DSN 574-4430
(804) 764-4430
FAX DSN 574-8033
(804) 764-8033

Earth Pledge

**“I pledge to protect the Earth,
And to respect the web of life upon it,
And to honor the dignity
of every member of our global family.
One planet, one people, one world, in harmony.
With peace, justice, and freedom for all.”**

What is Earth Day?

Earth Day is a international event demonstrating concern and mobilizing support for the environment. It was first celebrated on April 22, 1970, when millions of individuals across the country participated in such activities as tree plantings and community clean-ups.

As a single event, Earth Day represents the commitment and significant investment this nation and over 141 other countries around the world have made toward positive environmental security. From the Azores to California, ACC will sponsor Earth Day activities on every base. The 128,000 military and civilian personnel of ACC as well as their families and local communities will make a significant contribution to the overall impact of this monumental event.

It is important to remember that Earth Day represents more than just a one day event; it exemplifies our commitment to ensuring environmental security of the public resources entrusted to our care. ACC bases are in a unique position to be able to exercise leadership in this year's Earth Day celebration.

This year's international theme, as determined by Earth Day International, is “Save Our Habitat Earth-- Security for the Earth: the Military and the Environment.” (See Appendix A.) There are several national themes as well. For example, Earth Day USA's 1996 theme concentrates on the health consequences of environmental pollution, while Earth Day Resources' theme centers around clean water issues. There are also numerous local organizations, each with their own theme.

Your efforts and support of Earth Day XXVI represent the best display of the U.S. Air Force's, the Department of Defense's, and our country's commitment to making every day a day in which we do our best to protect our nation and our environment.

Planning An Earth Day Event

Planning a basewide Earth Day event is very much like planning an Air Show, a Community Appreciation Day, or an Open House. It is similar, but is planned using Earth Day and the environment as central themes.

Before planning your Earth Day event, check with your base leadership. It is necessary to plan your event far enough ahead to ensure a place on the base calendar. Your program requires the guidance, direction, and endorsement of base leadership in order to be successful. ***Get base leadership support before you begin to plan your Earth Day event.*** Also check with community leaders. If an Earth Day celebration is

already planned for your local community, ask about combining your events, rather than staging your own event.

If you are new to organizing programs, you may be wondering where to start. This resource guide includes easy-to-follow directions, along with sample letters and example activities to help you form a committee, acquire sponsors and exhibitors, and plan and publicize your event.

A. Assemble an Earth Day Planning Team

A good place to start is to develop a “strawman” concept and then brief and gain support of the base leadership. Next, organize a crossfunctional Earth Day planning team. Creating a team of interested and dedicated individuals is key to the success of an Earth Day celebration. The team is responsible for planning and producing the event. This includes a variety of tasks, such as selecting sites, dates, and activities to support the theme; developing program goals and a budget; generating sponsors and publicity; and providing activities, exhibitors, and entertainment. Your team should include at least one representative from Public Affairs and one from Services, along with anyone else who wishes to participate, including community leaders. It’s also a good idea to have representation from Legal, if possible. (See Appendix B.)

Plan a *short* kick-off meeting at a time and location that is convenient to all team members. At the meeting, have everyone introduce themselves and describe what it is they do on a day-to-day basis, as well as what they can contribute to the planning team. For example, the representative from Services can help identify and acquire sponsors and exhibitors and can help with promotional materials.

B. Brainstorm Program

Begin by brainstorming program goals. Program goals can be simple; for example, your goal could be “...to educate the public through hands-on activities on how one person can make a difference in preserving the global environment.” Ask for ideas for Earth Day activities and write them on a white board or large pieces of paper taped to the wall. Encourage everyone present to participate.

Keep in mind the type of event you want to have. Will your event have a carnival atmosphere with games and clowns or will it be more serious with speakers addressing a seated crowd? Either one or a combination of both is appropriate, depending on what type of audience you are trying to reach. It is a good idea not to book an entire day of speakers; mix in some other entertainment (singers, skits, a magician) if you are going to have a seated audience. Remember that children’s games are fun and easy to do, and where you have children, you have the added bonus of parents.

C. Categorize the Program Goals

Categorize ideas under topics such as “hands-on activities,” “interactive exhibits and demonstrations,” and “entertainment and speakers.” Make a list of community organizations that fit these categories and can help you achieve your goals. Possibilities include:

- Parks & recreation departments and state parks
- Museums and nature centers
- Extension services such as the agricultural extension service

- Environmental groups such as the Sierra Club and Audubon Society (avoid controversial organizations)
- District and regional offices of state agencies, including the U.S. EPA
- Youth organizations such as college student unions, scout troops, and high school ecology clubs
- Recycling and beautification associations
- Grassroots organizations and civic groups such as the Rotary Club, Jaycees, Kiwanis, Jr. League, and League of Women Voters
- Retirement groups
- Businesses such as health food stores, diaper services, and organic lawn care businesses
- Dance troupes, musicians, and artists
- Radio, television, and newspapers (may provide free advertising and then report on event)

D. Delegate Responsibilities

Delegate responsibilities. Choose a coordinator for each of the following event areas: exhibitors, volunteers, sponsors, entertainment, production, and publicity. *Remember that your Services representative is the only one who can procure sponsorship or accept any sort of donations.* Make a list of action items to be completed by each coordinator, along with a timetable for completing those actions. Action items include the following.

1. Choose a date for your event. A week-long celebration can have the greatest impact, perhaps culminating with a parade or festival on a chosen day. A determining factor will be whether you are going to open your event to the general public, in which case may choose to have your event over the weekend, rather than actually on Earth Day. When setting the date, be sure to avoid competing events, such as Arbor Day festivities or other community events.

2. Choose and reserve, if necessary, a suitable location(s). When determining a suitable location for your event, keep in mind:

- * the number of attendees you expect;
- * local climate (don't pick a picnic shelter if it is still snowing in March in your area of the country)
- * availability of the possible sites (reserve ahead of time, if possible);
- * suitability of the possible sites (Can booths or tables be set up? Is there electricity available? Are there restrooms nearby?); and
- * parking availability.

3. Prepare a draft agenda of scheduled events. Set an agenda of what you would like to happen, keeping in mind that it is likely to change 20 to 30 times before the event! If you plan to have speakers, get their commitments early and set an agenda so they will know at what point during the day you expect them to be there. This also holds true with any entertainers you may hire, such as clowns or magicians. If you plan to have exhibitors, set times for them to set up and tear down their booths. (See Appendix C.)

4. Compile an invitation list. Think about who your target audience is and the best way to reach them, then compile an invitation list. This can be as simple as all base personnel, the local radio station(s), the local TV station(s), the local newspaper(s), the City Council.

5. Consider promotional items. This year (1996), ACC has a limited amount of funding available to bases on a *first-come, first-served* basis for ordering giveaways such as coloring books, games, and such. Promotional items targeted at education and awareness--especially for younger audiences--are acceptable under the provisions of AFI 65601. Education and awareness activities are also supportable (with sufficient justification) as valid P2 funding requirements. See your P2 Program Manager for programming funds for the out years.

6. Order Earth Day banners, posters, and flyers. The Services representative on your planning team can assist in locating sponsors or acquiring nonappropriated funds to purchase these types of items.

7. Reserve the base marquee for the week before Earth Day so you can advertise your event. Determine ahead of time what you want to say on the marquee.

8. Alert the media. Provide the local media (radio, television, and newspaper) with pertinent information about your specific event. (See Appendix D.)

9. Make site arrangements. Will traffic cones need to be set out? Will you need to rent portable toilets? Arrange to have easily accessible recycling bins set up as well as trash cans.

Before convening the meeting, set a date and location for your second (follow-up) meeting and make sure everyone is aware of his or her responsibilities or assignments. Exchange office addresses and phone numbers. Also, keep the base leadership informed of your ideas and progress.

Example Programs

Examples of various types of Earth Day activities are provided here. The focus of any Earth Day event should be to provide education and awareness. Every base has something unique to offer. The following activities and demonstrations have been proven to be highly successful at Earth Day celebrations.

Waste Management

- Gather recyclables (cans, paper, glass) and bring to event to “sell” for tickets. Use tickets to buy trees, coloring books, or other prizes. (Example: 25 cans or bottles = 1 ticket; 1 week’s worth of newspapers = 1 ticket; the largest piece of cardboard = 2 tickets.)
- Create a mini landfill. Dump a load of trash from a base dumpster onto the lawn. Have volunteers don masks, goggles, and gloves and perform trash separations. This activity demonstrates the large amount of recyclables that are thrown away and actually saves these recyclables from the local landfill. (Don’t throw recyclables back into the dumpster!)
- Stage a “Great Balls of Foil” contest. Have schools or other organizations compete to create the largest ball of aluminum foil. Display the balls at your event and weigh them to determine the winner.
- Hold non-toxic cleaning demonstrations. You will need some basic household ingredients and some dirty cloth, metal, and glass. (See Appendix E.)

- Build a compost pile. You will need “dry brown stuff” (dry leaves, dead weeds, and shredded cardboard) and “wet green stuff” (grass clippings and plants). Have the “ingredients” in piles so participants can add to the recipe. (See Appendix E.)
- Build a sculpture from recycled materials. Create a large caterpillar or dinosaur from crushed aluminum cans or “draw” an outline on the ground and fill it in with recyclables to create a picture.

Energy Conservation

- Have an electric, solar, or natural gas vehicle display. (Contact your local utility company for assistance.)
- Have a solar bake-off. Set up solar box cookers in a sunny spot and have participants try different recipes and vote. Creator of best recipe wins a prize. (Example recipes: nachos/hotdogs/baked potatoes/s’mores.) To make a solar box cooker:
 - a. Find three cardboard boxes that can “nest” inside each other with flaps tucked in. If there are no flaps, line foil-wrapped cardboard between the box walls. Fold down sides so the boxes are all the same height. The smallest box should be about 19” x 23” x 8”.
 - b. Line the smallest (inside) box with aluminum foil.
 - c. Place a piece of glass or two layers of clear mylar (20” x 24”) over the smallest box so there are no air leaks.
 - d. Place the box outside on a dry surface that will be sunny for several hours. Start cooking in mid-morning for best results. Cook in dark cooking pots with lids or in wide-mouthed glass jars painted black on the outside. Poke a small hole in each jar lid to allow steam pressure to escape.

Pollution Awareness

- Hold a dirty sock contest. This contest demonstrates how auto emissions affect air quality and is held in a parking lot. Each contestant places a clean white sock over his or her car’s exhaust and runs the engine for 30 seconds. The contestant with the dirtiest sock wins a free car tune-up (maybe by volunteers at the auto hobby shop), while the one with the cleanest sock wins a trip or other comparable prize. (Note: The socks and prizes can be donated by a local vendor, but Services must coordinate this.)
- Create a mini environmental disaster using common household supplies. Separate participants into several teams. Fill aluminum pie pans or empty butter tubs with water, explaining that an oil tanker has just sprung a leak on each “lake” and it is the responsibility of each team to clean up the pollution with minimal damage to the environment. Describe the methods available to them, which are *containment* (using 25-cm sections of twine), *recovery* (using an eye dropper), *sinking* (using sand), *adsorption* (using paper towels), and *dispersal* (using liquid detergent). Allow groups to choose their strategy, then add 2 drops of motor oil to their water to begin. Discuss what worked best and why. Did all methods actually eliminate the problem? Remember not to pour the contaminated water on the ground or down the sink when done! (Collect in a bucket and take to oil recycling center.)

- Explain global warming by creating a greenhouse demonstration. Place two shallow cardboard boxes side-by-side in the sunlight. Put a thermometer inside each box, preferably in a shaded area. Place a piece of glass on top of one of the boxes, creating a tight seal. Within minutes, the temperature in the glass-covered box will have risen above that in the uncovered box. You can further demonstrate this measuring the rate at which ice cubes melt in the boxes.
- Ask everyone on base to ride bicycles to work. All participants are eligible for a drawing for a free bicycle (donated by a local vendor.)
- Stencil on storm sewers “Do Not Dump - Drains to Creek.”
- Have a “ride a bike to work day” where participants receive a ticket for a drawing for a free bicycle, donated by a local vendor.

Natural Resource Conservation

- Plant pumpkin seeds or sunflowers in a common area.
- Have participants dig up and bring in unwanted seedlings from their yards and bring them to a common area, where they can be planted or distributed.
- Have a “Paul Bunyan” contest. Find the largest tree in the area. Measure the tree by the number of people that can fit around it by holding hands.
- Hand out disposable cameras and have a wildlife photo contest. (Would require assistance of 1-hour photo developer.)
- Play habitat hide and seek. Select an animal and create a home for it. Have contestants find the home and identify the animal it belongs to.
- Make trails with legends identifying trees and plants. Also “plant” garbage with explanation signs of why it shouldn’t be there. (Example: Six-pack rings get caught around animal necks and strangle them/turtles swallow plastic bags and die/etc.) Might “plant” non-indigenous plants with explanations of why they don’t grow naturally there.
- Locate and identify edible plants, such as nut and fruit trees, honeysuckle, and grapevine, rose petals, and mint leaves.

Appendix A. Earth Day International Statement

(Julie had this scanned)

Appendix B. Planning Team Roles

1. Base Leadership: Earth Day is not a CE program, an LG program, or any other organization's program; it is a *base* program and, therefore, needs the support and encouragement of the Wing Commander. Your program requires the guidance, direction, and endorsement of base leadership in order to be successful. Base leadership support will empower your Earth Day planning team and ensure their success.

Get base leadership support before you begin to plan your Earth Day event!

2. Base Environmental Flight: The base Environmental Flight has professionals with invaluable experience in all aspects of environmental management. They can provide technical support in arranging environmental displays or showcasing the base's environmental programs, projects, and successes. The Environmental Flight has valuable points of contact with outside environmental agencies that can assist in putting together an exciting, professional Earth Day event.

3. Public Affairs (PA): One of the responsibilities of PA is to develop and direct their commander's community relations program. Because of this, PA deals with a variety of off-base civic leaders and organizations. For your Earth Day event, PA can:

- Ensure public awareness and encourage attendance at your program through announcements/features on base (through base newspaper) and off base (through media releases)
- Can function as official "spokesperson" for all off-base media queries concerning the program
- If appropriate, may be able to acquire services of Air Force band for program

4. Services (SV): Services programs contribute to readiness and improving productivity through programs promoting fitness, esprit-de-corps, and quality of life for Air Force people. Services provides an array of activities designed to fulfill basic individual, family, and group needs. Planning a basewide Earth Day event is very much like planning an Air Show, a Community Appreciation Day, or an Open House, and Services can provide support for any of these types of events. *Please note that AFI 34-207 allows only the Services Squadron to accept/acknowledge corporate support in the way of monies, services, and/or products.*

Appendix C. Sample Letters & Forms

1. Sample exhibitor letter
2. Sample registration form
3. Sample programs

Source: *Earth Day Guide*. Produced by The Earth Day Committee of Richmond, VA.

(MG: Scan originals)

Appendix D. Publicizing Your Event

1. “Publicizing an Earth Day Event”

Source: *Earth Day Guide*. Produced by The Earth Day Committee of Richmond, VA.

2. “How to Work with the Media”

Source: *Earth Day Organizer’s Manual*. Produced by Earth Day USA.

(MG: Scan originals)

Appendix E. Reference Articles

1. “Backyard Composting: A How-To Guide”
2. “Recipes for a Healthy Environment”

Source: *Global Environmental Outreach*. Published by ACC CES/ESC.

Backyard Composting: A "How-To" Guide

This month the ice and snow will begin to thaw on some ACC bases, and it will once again be time for that great American pastime--yardwork! But, unfortunately, a large percentage of the yard waste produced during yardwork ends up in our nation's landfills. So what is the best way to manage yard waste? Composting!

Composting is a biological process during which naturally occurring microorganisms convert organic waste, such as yard trimmings, into a product that can be used for mulching, fertilizing, or conditioning soil. Many ACC bases sponsor basewide composting programs, but if yours does not, you can start your own compost pile easily and inexpensively.

The three most important ingredients in any compost pile are **moisture**, **oxygen**, and **temperature**. An ideal diet for the microorganisms that do all the work consists of a carbon source (or "dry brown stuff"--dry leaves, dead weeds, and even shredded cardboard) and about one-half to one-third as much of a nitrogen source (or "wet green stuff"--grass clippings and plants) so the pile is moist. Air can be added to speed aerobic decomposition by turning the pile regularly, poking holes in it, or burying drainage pipe in it. The compost pile should begin "cooking" once it is established and should feel warm to the touch throughout.

Getting Started

To start, choose a level spot about 3 feet square near a water source and preferably out of direct sunlight. Clear the area of sod and grass. You may wish to build a composting bin out of chicken wire, scrap wood, or cinder blocks, although this is not necessary.

Place coarse brush at the bottom of the pile to allow air to circulate. The compost pile is built by adding successive layers of organic material--a mixture of "dry brown stuff" and "wet green stuff." Sprinkle water on the pile after each layer of organic material is added so that the pile maintains the consistency of a squeezed-out sponge, but is not soggy. Also, the pile must be regularly aerated by turning it with a pitchfork and mixing the old layers with the new layers, by poking holes in the pile, or by burying pipe in the pile so there is a constant source of fresh air.

Factors that speed up the composting process include chopping large material into smaller pieces, keeping the pile moist, and frequently turning the pile. When composting is completed, the resulting soil will appear as a dark crumbly material uniform in texture. A carefully maintained compost pile can turn waste into compost in as little as 6 weeks!

What Can be Composted?

Most organic materials are acceptable for use as compost, including grass clipping, leaves, paper (including shredded newspaper), coffee grounds, sawdust, wool and cotton rags, and manure from herbivorous animals (i.e., cows, horses, sheep, chickens). Woody yard waste can be composted, but should be clipped and sawed into small pieces, or shredded. Many foods can be composted as well, but meats, grease, and dairy products should be omitted because they cause odor problems and attract pests.

What Cannot be Composted?

Non-organic materials (styrofoam and metal), plastic, and charcoal or coal ashes are not suitable for composting. Other materials that should not be composted are diseased plants, vegetation treated with pesticides, food waste that may attract pests, and pet wastes, which may contain disease.

Why Composting is the Only Option for Yard Wastes

According to the U.S. EPA, by mid-1995 20 states will have banned landfill disposal of yard trimmings, the second largest component (by weight) of the nation's solid waste stream. Aside from the fact that yard wastes are relatively clean and biodegradable and therefore waste valuable landfill space, as yard wastes decompose in landfills, they generate methane gas and acidic leachate. Methane is a colorless, explosive gas that can seep underground and into nearby buildings, where it has the potential to explode. Yard wastes also contribute acidity to landfill leachate, and acid leachate dissolves many toxic metal pollutants, making the landfill leachate more toxic. Composting does not cause these potential problems because it relies on aerobic rather than anaerobic microbiologic activity.

Burning leaves and yard wastes may seem like a viable option for disposing of yard wastes, but in reality this pollutes the air with particulate matter and hydrocarbons, which contain a number of toxic, irritating, and carcinogenic compounds. Leaf smoke also contains carbon monoxide, which is absorbed into the bloodstream and reduces the amount of oxygen the body can absorb. It is especially detrimental to infants, the elderly, smokers, and persons with chronic heart and lung disease. Additionally, burning yard wastes can lead to uncontrollable fires. A number of states have banned or restricted leaf burning.

Closing the Loop

Composting is a feasible and affordable means to dispose of certain yard wastes and produces a useful end product. Even if you decide not to compost, consider purchasing compost instead of peat moss, vermiculite, or top soil whenever possible.

COMPOSTING TROUBLESHOOTING GUIDE

| Symptoms | Problem | Solution |
|---|--------------------|---|
| Bad odor | Not enough air. | Turn the pile. |
| Dry center | Not enough water. | Add water while turning the pile. |
| Damp and warm only in center | Pile is too small. | Collect and add more material. |
| Damp and sweet-smelling but not warm | Lack of nitrogen. | Mix in a nitrogen source ("wet green stuff") |

Source: OEA Pollution Prevention Handbook.

Recipes for a Healthy Environment

Have you ever thought about how many chemicals you use every day? Disinfectants, cleaners, and air fresheners all contain chemicals that are potentially damaging to your health and the environment. You can make a number of simple substitutions using natural ingredients that work equally well or, in some cases, better. When you're cleaning up the mess left after the holidays, try some of these.

Floor and Rug Cleaner

Ceramic tile can be cleaned effectively using a solution of 1/4 cup baking soda, 1/2 cup white vinegar, 1 cup ammonia, and 1 gallon warm water. This solution also works well as a general cleaner.

You can make floor polish for linoleum and vinyl by mixing 1 part thick boiled starch with 1 part soap suds. Rub this mixture on the floor and then polish dry with a clean, soft, dry cloth. Commercial floor wax may be safely stripped by pouring on club soda, scrubbing, soaking for a few minutes, and then wiping clean.

Clean wood floors by damp mopping with a mild vegetable oil soap; dry immediately.

Rug and carpet cleaner can be made by mixing 1/2 cup dishwashing detergent and 1 pint boiling water. Cool and whip into a stiff foam with an electric mixer. With a damp sponge, apply the solution to 4-foot x 4-foot sections. Wipe off the suds and then rinse with a solution of 1 cup vinegar in 1 gallon warm water. Rinse the rug and then wipe, changing the rinse water frequently. Clean your rug on a dry, warm day so you can open the windows to facilitate drying.

Spot Remover

Butter, coffee, gravy, and chocolate stains may be removed by scraping off or sponging up as much of the spot as possible and then dabbing with a cloth dampened in a mixture of 1 teaspoon white vinegar and 1 quart cold water. Or--apply a solution made of equal parts ammonia and water. (The residual ammonia stain can be removed with salt and water.) To remove grease spots, try one of these: apply a paste of cornstarch and water paste; cover with baking soda or cornmeal, let dry, and brush off; or scrub the spot with toothpaste. For spots on rugs, sprinkle on dry cornstarch and vacuum up.

Furniture Polish

Use olive oil, lemon oil, beeswax, or a mixture of beeswax and olive oil. A combination of 2 teaspoons lemon oil and 1 pint mineral, vegetable, or olive oil in a spray bottle also works.

Metal Polish

To polish silver, cover the bottom of an aluminum or enameled pan with aluminum foil. Add silver to be cleaned. Fill with enough water to cover the silver. Add 1 teaspoon baking soda and 1 teaspoon salt. Boil for 3 minutes. Remove the silver, wash in soapy water, and polish dry. Do not use this method for silver jewelry or flatware with hollow handles.

For brass, scrub with worcestershire sauce or toothpaste; pour on tomato ketchup, let sit, and remove when dry; or clean with water in which onions have been boiled. For copper, pour white vinegar and salt over copper and rub. To polish either brass or copper, use a lemon juice and salt paste.

Glass Cleaner

Mix 3 tablespoons ammonia, 1 tablespoon white vinegar, and 3/4 cup water and pour into a spray bottle. Other recipes that work equally well are (1) 2 tablespoons vinegar in 1 quart water, and (2) 1 quart water combined with 1/2 cup vinegar and 1 to 2 tablespoons lemon juice or rubbing alcohol.

Oven Cleaner

Oven cleaners usually contain lye, which is extremely toxic. A good alternative to commercial oven cleaners is a paste of water and baking soda which is applied on the spots that need cleaning and then scrubbed with steel wool. (Be careful not to get any of the mixture on the elements.) You can also sprinkle salt on spills while they are warm and then scrub.

Drain Cleaner

Prevent drain clogs by covering drains with screens to keep out grease, hair, and food scraps. If blockage does occur, pour 1 cup each baking soda, salt, and white vinegar down the drain. Wait 15 minutes and then flush with boiling water. If the clog is especially tough, use a plumber's snake or plunger.

Alternately, toss a handful of baking soda and 1/2 cup vinegar down the drain and then cover tightly for 1 minute. Rinse with hot water.

Toilet Bowl Cleaner

Pour 1/2 cup chlorine bleach in the bowl. Let stand for 30 minutes and scrub clean. Or scrub with a solution of 1/2 cup borax in 1 gallon water.

Disinfectant/Germicide

Soapy water is one of the simplest and best disinfectants. Borax or sodium carbonate (washing soda) are also effective.

Air Freshener/Deodorizer

Air fresheners do not really freshen air. According to the Earth Works Group, they deaden your nasal passages or coat them with oil so you can no longer smell the offensive odor. Instead, try vinegar or lemon juice in a spray bottle, or set small dishes of either of these liquids or baking soda in various locations around your house. A cotton ball saturated with pure vanilla will overpower foul smells in your car or refrigerator. Grinding lemons in your garbage disposal will leave it with a fresher smell.

All these substitutions are simply made with readily available, natural ingredients. Don't feel overwhelmed trying suddenly to change all the cleaners you have always used. Implement a few at a time. Remember, each substitution goes a long way toward creating a chemical-free house, a safer environment, and a healthier family.

Pollution Prevention (P2) Program Manager's Checklist

1. Does the installation have a P2 Management Action Plan (MAP) approved by the wing's leadership? (AFI 32-7080) Is P2 being worked by a crossfunctional team that reports to your installation Environmental Protection Committee? (AFI 32-7005)
2. Does the installation have a P2 Opportunity Assessment (OA)? Has it been updated in the last 3 years? Are the OA's used to update the MAP? (AFI 32-7080)
3. Does the installation have a six year budget plan or program to implement its Pollution Prevention efforts? (AFI 32-7001) Has it updated or loaded this budget into the A-106 Module of CE's Work Information Management System (WIMS)? (AFI 32-7080) Has this budget plan or program been reviewed and approved by the EPC? (AFI 32-7005)
4. Does the installation have or is it seeking P2 partnerships with local, state or federal agencies, academic institutions, businesses or community organizations? Does the installation have a P2 outreach effort and conduct P2 awareness and training activities? (SAF/CSAF Memo: AF P2 Strategy, 24 Jul 95, Objective 4 and 1 respectively)
5. Does the installation have an established affirmative procurement program for all EPA guideline items? Are these items flagged in all supply procurement systems? Are base personnel encouraged to purchase recycled content/environmentally friendly items? (July 95 DoD guidebook: The Affirmative Procurement Program; and AFI 32-7080)
6. Does the installation have a program to reduce hazardous waste generation at the source? Does the installation have procedures to centrally control the purchase and use of hazardous materials? (AFI 32-7080)
7. Does the installation have a plan or program to reduce targeted Volatile Air Emissions? Does the installation have a Halon Management Plan and a Refrigerant Management Plan? (SAF/CSAF Memo: AF P2 Strategy, 24 Jul 95, Objective 3)
8. Do all DoD employees who apply pesticides (as part of their job description) have a current DoD Pesticide Certification in the appropriate categories? (This includes golf course personnel, entomology, grounds, landscapers, and natural resource managers who apply general and restricted use pesticides). Are all contractors who apply pesticides anywhere on base currently State Certified in the appropriate pesticide categories (NOT registered technicians or working under someone else's certification.) (SAF/CSAF Memo: AF P2 Strategy, 24 Jul 95, Objective 3; and AFI 32-1053)
9. Does the installation have a current Solid Waste Management Plan or a section in the P2 MAP dedicated to solid waste management? (AFI 32-7042) Does the installation have a Qualified Recycling Program (QRP) and an appointed QRP manager? (AFI 32-7080)
10. Does the installation have a program for reducing energy consumption by 30% by the year 2005 based on energy consumption per-gross-square-foot of its buildings in use in 1985? (SAF/CSAF Memo: AF P2 Strategy, 24 Jul 95, Objective 3)

SECTION 1
PROCESS

Pollution prevention programs seek to eliminate the purchase of materials and generation of wastes known to be hazardous or otherwise non-recoverable. USAF activities may be modeled as processes which may include base industrial activities, vehicle maintenance, printing operations, or pest management. Each process relies on a steady stream of materials and may generate wastes as by-products of these processes.

The specific effort of a P2 program is to target process inputs (sources) and outputs (wastes) for reduction or elimination where possible. This is known as source reduction. Where source reduction is not feasible or cannot eliminate waste, materials may be reused or recycled to reduce waste and purchase requirements. Goals to purchase products with recycled content through affirmative procurement help close the recycling loop by creating demand for recycled products.

This section describes the process needed to develop a pollution prevention program to meet Air Force P2 reduction goals. This P2 process is divided into the eight elements as illustrated in Figure 1-1. The following subsections describe each element of the P2 process and list the management actions needed to initiate the P2 activity and to continue functioning in the future (recurring actions). The tables included in the following subsections assign Offices of Primary Responsibility (OPR), Offices of Collateral Responsibility (OCR), when necessary, and the dates of estimated completion and actual completion for each management action.

Figure 1-1 The Pollution Prevention Process

table not shown

1.1 POLICY

Policy is defined as a statement of values embodied in a goal that the USAF will achieve through commitment of resources. Pollution prevention policy is contained in Air Force Policy Directive (AFPD) 32-70, Environmental Quality, and AFI 32-7080, Pollution Prevention Programs. This section describes the areas in which ----- AFB outlines its internal policies and procedures for meeting the USAF P2 goals listed in the guide. It includes assigning responsibilities and deadlines to each management action. These responsibilities and management actions are presented in Table 1-1.

Table 1-1 Establishment of Pollution Prevention Policies

| Action | OPR | Estimated Completion | Actual Completion |
|---|--------------------|----------------------|-------------------|
| Initial: Incorporate ---- - AFB P2 program into the Environmental Protection Committee (EPC) Recurring: None | Wing Commander | | 1993 |
| Initial: Establish a P2 working group under the EPC and establish teams in the areas of ODSs, EPA 17s, HW, MSW, AP, PM, and TRI chemicals. | EPC | | 1993 |
| Recurring: Staff the teams with necessary personnel; evaluate effectiveness of each group; modify structure as required | EPC | Annually | |
| Initial: Establish format for team meetings and task accomplishments toward meeting P2 goals | P2 Subcommittee | | 1993 |
| Recurring: Meet as necessary; assign responsibilities based on needs at that time | P2 Subcommittee | As needed | |
| Initial: Develop P2OA to establish program organization and strategies for meeting all USAF P2 reduction goals | P2 Subcommittee | | 1995 |
| Recurring: Update P2OA | P2 Subcommittee | Annually | |
| Initial: Develop the Facility Energy Plan | CES/CEOE | 1997 | |
| Recurring: Update Facility Energy Plan | CES/CEOE | Annually | |
| Initial: Establish Energy Management Steering Group (EMSG), staff appropriately. Establish supporting Energy Working Groups for all appropriate organizations | CES/CEOE | | 1995 |

Table 1-1 Establishment of Pollution Prevention Policies
(continued)

| Action | OPR | Estimated Completion | Actual Completion |
|---|------|----------------------|-------------------|
| Recurring: Staff the teams with necessary personnel; evaluate effectiveness of each group; modify structure as required | EMSG | Annually | |

1.2 BASELINE

A baseline is a measurement of the amount of a targeted substance purchased or generated during a specified time period. Baselines establish the beginning numerical status of a targeted substance relative to the P2 goals. Information collected to determine the baseline includes descriptions and quantities of materials purchased or generated, unit costs of purchase or disposal, and a description of each process using the material and generating the waste. As described in a 2 May 1995, memorandum from Headquarters (HQ) USAF/CEV, baselines are not to be adjusted after 26 May 1995, except under the conditions described in the Metric Reporting Guidance attached to the memorandum. The Metric Reporting Guidance only allows for baseline adjustments when an installation is transferred from one MAJCOM to another. Furthermore, no adjustments will be allowed to compensate for mission changes, personnel increases or decreases, or Base Realignment and Closure Commission actions for installations within the same MAJCOM. The establishment of baselines and the assignment of OPR are presented in Table 1-2.

[Contractor Name] prepared baseline data for the program elements ODSs, EPA 17s, PM, and TRI chemicals. Data for ODSs, EPA 17s and TRI chemicals are based on the Toxic Chemical Inventory Technical Report prepared by [Contractor] in August 1995. The purpose of the report was to identify those EPCRA Section 313 toxic chemicals that were manufactured, processed, or otherwise used in CY94 on ----- AFB. Baseline and inventory data for PM was compiled by ----- AFB and [Contractor] during the P2OA. HW and MSW baselines have been set by ----- AFB based on [MAJCOM] guidance dated _____. Baseline data collected for ODSs, EPA 17s, PM, and TRI chemicals result from annual quantities of products and chemicals procured for ----- AFB.

Table 1-2 Establishment of Pollution Prevention Baselines

| Action | OPR | Estimated Completion | Actual Completion |
|--|---------|----------------------|-------------------|
| Initial: Establish ODS CY94 baseline | CES/CEV | | Feb 1996 |
| Recurring: Track progress toward reaching compliance of elimination of ODS purchases | | Annually | |

Table 1-2 Establishment of Pollution Prevention Baselines
(continued)

| Action | OPR | Estimated Completion | Actual Completion |
|---|----------------------|--------------------------|-------------------|
| Initial: Establish EPA 17 CY92 baseline Recurring: Modify baseline based on variations in mission and in accordance with [MAJCOM]/CEV | CES/CEV | As required | Feb 1996 |
| Initial: Establish HW CY92 baseline Recurring: Modify baseline based on variations in mission and in accordance with [MAJCOM] | CES/CEV | As required | Feb 1996 |
| Initial: Establish MSW CY92 baseline Recurring: Modify baseline based on variations in mission and in accordance with [MAJCOM]/CEV | CES/CEV | As required | Feb 1996 |
| Initial: Identify EPA Guideline Items purchased by ----- AFB and determine which purchases do not meet EPA recycled content standards Recurring: Evaluate program to ensure all current Guideline Item purchases are addressed | CES/CEV | Dec 1996 Annually | |
| Initial: Establish energy conservation CY85 baseline Recurring: Modify baseline based on variations in mission and in accordance with [MAJCOM] | CES/CEOE CES/CEOE | As required | 1985 |
| Initial: Establish pesticide management CY93 baseline Recurring: Modify baseline based on variations in mission and in accordance with [MAJCOM]/CEV | CES/CEV | As required | Feb 1996 |
| Initial: Establish TRI chemical CY94 baseline Recurring: Modify baseline based on variations in | CES/CEV | As required | Feb 1996 |

mission and in accordance
with [MAJCOM]/CEV

1.3 REQUIREMENTS

Installation requirements identify the quantity of material or waste that must be reduced to meet the Air Force P2 reduction goals. The requirement is the difference between the goal and the baseline, and it identifies what the program needs. For example, the first energy goal is to reduce energy use by 10 percent by 1995 when compared to a 1985 baseline. If the 1985 energy consumption was 0.149 MBtu, a 10 percent reduction amounts to 0.0149 MBtu; this is the requirement. If energy consumption efforts after 1985 have already yielded a reduction of 0.004 MBtu, this can be subtracted, and the remaining requirement is 0.0109 MBtu, or the amount of reduction still needed to attain the reduction goal. This process is repeated to obtain the requirements for the second and third phase energy reduction goals (20 percent by 31 December 2000 and 30 percent by 31 December 2005, respectively). For non-baseline areas (e.g., affirmative procurement), the requirement will equal the difference between the goal and the current measurement. The identification of the requirements for meeting the P2 goals is outlined below in Table 1-3.

Table 1-3 Pollution Prevention Program Requirements

| Action | OPR | Estimated Completion | Actual Completion |
|--|-----------------|----------------------|-------------------|
| Initial: Determine requirements for ODSs | P2 Subcommittee | | Feb 1996 |
| Recurring: Update requirements | P2 Subcommittee | Annually | |
| Initial: Determine requirements for EPA 17 chemicals | P2 Subcommittee | | Feb 1996 |
| Recurring: Update requirements | P2 Subcommittee | Annually | |
| Initial: Determine requirement for HW | P2 Subcommittee | | Feb 1996 |
| Recurring: Update requirements | P2 Subcommittee | Annually | |
| Initial: Determine requirement for MSW | P2 Subcommittee | | Feb 1996 |
| Recurring: Update requirements | P2 Subcommittee | Annually | |
| Initial: Determine requirement for AP | P2 Subcommittee | | Feb 1996 |
| Recurring: Update requirements | P2 Subcommittee | Annually | |

| | | | |
|--|-----------------|----------|----------|
| Initial: Determine requirements for energy conservation program | CES/CEOE | | Feb 1996 |
| Recurring: Update requirements | CES/CEOE | Annually | |
| Initial: Determine requirements for pesticide management program | P2 Subcommittee | | Feb 1996 |
| Recurring: Update requirements | P2 Subcommittee | Annually | |
| Initial: Determine requirements for TRI chemical program | P2 Subcommittee | | Feb 1996 |
| Recurring: Update requirements | P2 Subcommittee | Annually | |

1.4 OPTIONS

When base requirements are outlined, P2 options for meeting the requirements must be identified, and these options are identified through OAs. The Air Force Installation Pollution Prevention Program Guide and the ----- AFB P20A Report outline the method for conducting OAs. The OAs identify the following: specific waste generating processes, a description of P2 options, the option's cost, the option's value in terms of which substances and program components are affected, how much each substance is reduced for each affected process, the unit cost of purchase or disposal for each substance, and the ROI. Table 1-4 lists the actions necessary to conduct and maintain current OAs.

Table 1-4 Actions for Conducting and Maintaining Opportunity Assessments

| Action | OPR | Estimated Completion | Actual Completion |
|--|---------------------------|----------------------|-------------------|
| Initial: Develop P2 options that will achieve base requirements for ODSs, EPA 17s, HW, MSW, AP, PM and TRI chemicals through OAs | P2 Subcommittee and Teams | | Dec 1995 |
| Recurring: Accomplish periodic OAs and develop new options as necessary | P2 Subcommittee | As required* | |
| Initial: Develop expertise to conduct in-house OAs | P2 Subcommittee | Ongoing | |
| Recurring: None | | | |
| Initial: Develop site-specific OA worksheets | P2 Subcommittee | | Dec 1995 |
| Recurring: Update worksheets | P2 Subcommittee | As required* | |
| Initial: Conduct site-specific OAs | P2 Subcommittee | | Dec 1995 |
| Recurring: Accomplish site-specific OAs and develop | P2 Subcommittee | As required* | |

new options as necessary

| | | |
|--|----------|--------------|
| Initial: Develop energy conservation options that will achieve base requirements | CES/CEOE | Ongoing |
| Recurring: Accomplish periodic OAs and develop new options as necessary | CES/CEOE | As required* |

* As required, at a minimum bi-annually, to assure compliance with reduction goals and review of processes.

1.5 SOLUTIONS

Solution sets that allow the USAF to meet its reduction requirements, are compiled from the range of options identified as a result of the OAs. The options in the solution set have been selected for implementation based on their technical feasibility, cost-effectiveness, prevention of pollutant cross-media transfer, and significant contribution to meeting the Air Force P2 reduction goals. The options within the solution set for each reduction goal year are first prioritized based on ROI (when available) and on cost when ROIs are not available. Table 1-5 lists the management actions necessary to identify solutions.

Table 1-5 Management Actions Necessary to Identify Solutions

| Action | OPR | Estimated Completion | Actual Completion |
|---|---------------------------|----------------------|-------------------|
| Initial: Select implementable options for ODS, EPA 17, HW, MSW, AP, PM and TRI chemicals | P2 Subcommittee | | Feb 1996 |
| Recurring: Continue to accept, evaluate, and prioritize options to maintain a viable pool of solutions for the above goal areas | P2 Subcommittee | Ongoing | |
| Initial: Select implementable energy conservation options | CES/CEOE | | 1994 |
| Recurring: Continue to accept, evaluate, and prioritize options to maintain a viable pool of solutions for the goal area | CES/CEOE | Ongoing | |
| Initial: Consider various Federal threshold levels (EPCRA, OSHA, CAA, etc.) when selecting implementing options | P2 Subcommittee and CEOE* | Ongoing | |
| Recurring: Continue to evaluate and update threshold levels and requirement | P2 Subcommittee and CEOE* | Ongoing | |

when selecting options

Initial: Document P2 Feb 1996
 implementable options in Subcommittee
 the Program Section of and CEOE*
 this P2 MAP

Recurring: Continue to P2 Ongoing
 update and prioritize Subcommittee
 options in the Program and CEOE*
 Section of this P2 MAP

* Indicates that P2 Subcommittee is OPR for program elements ODSs, EPA 17s, MSW, AP, PM, and TRI; CES/CEOE is OPR for energy conservation.

1.6 PROGRAM

Once the best solution sets have been identified, the actual program must be constructed based on the options in the solution sets. A decision-making body and process must be established to ensure funds are allocated against the highest priority options and that the program is carried into the future. Once funds have been allocated, the options may become projects. Table 1-6 describes this decision-making body and process.

Civil Engineering is the lead organization for consolidating and managing ----- AFB's P2 and budget. P2 projects must be programmed and budgeted in accordance with the associated rules for each appropriation. AFI 32-7001, Environmental Budgeting, provides programming and budgeting information. The following projects are not eligible for P2 funds:

- Acquisition project
- Air conditioning projects
- Depot level equipment
- Energy conservation MilCon projects
- Halon projects (except for prototype projects for aircraft)
- Environmental certifications and licenses
- Fire extinguisher projects
- Maintenance projects
- Non-environmental projects

Table 1-6 The Decision-Making Process

| Action | OPR | Estimated Completion | Actual Completion |
|---|---------|----------------------|-------------------|
| Initial: Submit the initial P2 budget to [MAJCOM] | CES/CEV | | 1994 |
| Recurring: Submit annual P2 budgets to [MAJCOM] | CES/CEV | Dec 15, Annually | |
| Initial: Enter initial | CES/CEV | | 1994 |

projects and equipment items into the A-106

Recurring: Enter annual projects and equipment items into the A-106 CES/CEV Dec 15, Annually

Initial: Submit initial unfunded P2 projects to [MAJCOM] CES/CEV 1994

Recurring: Submit annual unfunded P2 projects to [MAJCOM] CES/CEV June 15, Annually

Initial: Establish procedures to classify projects P2 Subcommittee Dec 1996

Recurring: Review procedures and classification system P2 Subcommittee Annually

Initial: Establish decision-making body to review solutions and determine P2 programs P2 Subcommittee Dec 1996

Recurring: Submit annual options to committee for review P2 Subcommittee Annually

1.7 EXECUTION

The tabular information in this section outlines the management actions that must occur to execute a successful P2 program. Timely execution is critical to program success and resource allocation. The management actions that correspond to the execution of the P2 program are listed below in Table 1-7.

Table 1-7 Management Action Execution of the P2 Program

| Action | OPR | Estimated Completion | Actual Completion |
|---|---------------------------|----------------------|-------------------|
| Initial: Establish execution goals and track percentage of projects executed throughout the fiscal year | P2 Subcommittee and CEOE* | | Feb 1996 |
| Recurring: Update goals as projects are completed | P2 Subcommittee and CEOE* | Ongoing | |

* Indicates that P2 Subcommittee is OPR for program elements ODSs, EPA 17s, MSW, AP, PM, and TRI; CES/CEOE is OPR for energy conservation.

1.8 METRICS AND REPORTING

The actual benefit of implemented ideas should be measured and compared with the projected benefit. This is done through the use

of metrics: measurements used to measure progress. Established metrics are founded upon baselines for each program element. Metrics will be tracked by the ## CES/CEV annually to determine whether the Air Force P2 reduction goals are being met for each program element. Metrics use actual execution data to measure program performance. Modifications to the program will be based on the difference between estimated completion and actual performance. Table 1-8 outlines the actions necessary to measure and report progress.

Table 1-8 Measuring and Reporting Progress

| Action | OPR | Estimated Completion | Actual Completion |
|---|---------------------------|----------------------|-------------------|
| Initial: Establish procedures to capture and record data for the AFPD metrics in ODSs, EPA 17s, HW, MSW, AP, PM, TRI chemicals and any other legally mandated reports | P2 Subcommittee | Jun 1996 | |
| Initial: Establish procedures to capture and record data for the AFPD metrics in EPA 17s and TRI chemicals | HazMat Pharmacy | Annually | |
| Recurring: Enter reportable data into the P2 module of the WIMS-ES for AFPD metrics | CES/CEV | Semi-Annually | |
| Recurring: Measure actual benefits of completed projects for all goal areas | P2 Subcommittee and CEOE* | Annually | |

Table 1-8 Measuring and Reporting Progress (Continued)

| | | | |
|--|---------------------------|----------|--|
| Recurring: Compare actual benefit and cost of each project completed in this reporting cycle with estimated completion benefit and cost for all goal areas | P2 Subcommittee and CEOE* | Annually | |
| Recurring: Update requirements with actual benefit data and modify program accordingly for all goal areas | P2 Subcommittee and CEOE* | Annually | |
| Recurring: Record actual cost data for improving future cost estimates for all goal areas | P2 Subcommittee and CEOE* | Annually | |
| Recurring: Evaluate the results of implementing solutions, determine the deviation from projected results, and initiate the requirements to generate new | P2 Subcommittee and CEOE* | Ongoing | |

options for all goal areas

| | | |
|---|------------------------------------|-----------|
| Recurring: Provide status briefings to Wing Commander | CES/CEV | Quarterly |
| Recurring: Initiate requirement for more options to be generated for all goal areas | P2 Subcommittee required and CEOE* | As |

* Indicates that P2 Subcommittee is OPR for program elements ODSs, EPA 17s, MSW, AP, PM, and TRI; CES/CEOE is OPR for energy conservation.

SECTION 2 PROGRAM

This section contains a program summary and listing of P2 projects for each program element. Table 2-1 summarizes and describes the relationship among the policy goals, baselines, requirements, benefits, and costs for each of the program elements. The policy goals are quantified according to percent reduction, and projected deadlines are specific for each program element.

Tables 2-2 through 2-7 in this section provide a listing of the P2 options by program element with associated costs, benefits, ROI, and OPR. These tables reflect where each program element stands in regard to HQ and AETC goals. If the program element has previously met Air Force P2 goals, the options listed assist with future reductions. If the program has not met its goals, the options specify what actions may be taken and the reductions that may be realized. Various assumptions were made when calculating benefits and costs. "NA" was entered as not applicable, "NC" was entered as not calculated due to insufficient data, and "Unknown" was entered if the benefit could not be calculated. ROI may be a value of zero because costs may exceed net operating savings, or because no capital costs are incurred with the action. Total benefits on the following charts represent the benefit if all of the proposed options were implemented. The base may choose to use a combination of options to reach the HQ and MAJCOM goals. The purpose of the P2 MAP is to provide adequate reduction options. Therefore, the figure for total benefits may exceed the actual amount of materials to be reduced.

Baseline data collected for ODSs, EPA 17s, PM, and TRI chemicals result from annual quantities of chemicals procured for ----- AFB. HW and MSW baselines are set based on ----- AFB and MAJCOM guidance dated _____. The quantity of products issued are assumed to be equivalent to the quantity of products used during that respective year. Therefore, reductions in application, release, disposal, and transfer are associated with the quantity of chemical purchased for data collection and tracking purposes. Data for MSW is based on actual volumes of MSW being disposed.

All the options and initiatives addressing each of the program elements

specified in Air Force Installation Pollution Prevention Program Guide originated from the following sources:

- ----- AFB Pollution Prevention Opportunity Assessment
- ----- AFB Energy Conservation and Reduction Plan
- [Contractor Name]

Table 2-1. Summary of ----- AFB's Pollution Prevention Program

| Pollution Prevention Program Elements | ODS (lbs) | EPA 17a (lbs) | TRI Chemicals (lbs) | Pesticide Management (lbs) | AP | Energy Conservation (KBtu/SF) | | |
|---------------------------------------|-----------|---------------|---------------------|----------------------------|----------|-------------------------------|-------|-------|
| Baseline Year | NA | CY92 | CY94 | CY93 | NA | CY85 | | |
| Baseline Quantity | NA | 37,636 | 16,500c | 9,636d | NA | 96,636d | | |
| Goal Reduction Year End | NA | CY96 | CY99 | CY00 | Annually | CY95 | CY00 | CY05 |
| Goal Reduction Percent | 100% | 50% | 50% | 50% | NA | 10% | 20% | 30% |
| Reduction Quantity | 8,606 | 18,818 | 8,250 | 4,818 | NA | 9.63 | 19.26 | 28.89 |
| Goal | 0 | 18,818 | 8,250 | 4,818 | NA | 86.67 | 77.04 | 67.41 |

Comparison of Inventory Quantities with Baseline Quantities

| | | | | | | | | |
|--|-------|--------|---------|-------|----|-------|----|----|
| CY94 Inventory Quantity | 8,606 | 24,695 | 16,500b | 9,259 | NA | 98.5b | -- | -- |
| Reduction Quantity Achieved through CY94 | NA | 12,941 | 0 | 377 | NA | +2.5 | -- | -- |
| CY94 Percent Reduction Achieved | NA | 34% | 0% | 4% | NA | -2.6% | -- | -- |

Summary of Additional Requirements to Meet Reduction Goals

| | | | | | | | | |
|--|-------|-------|-------|------|----|-------|-------|-------|
| Additional Reduction Quantity Required | 8,606 | 5,877 | 8,250 | 4441 | NA | 12.13 | 21.76 | 31.39 |
| Percent Remaining to Meet Reduction Goal | 100% | 16% | 50% | 46% | NA | 12.6% | 22.6% | 32.6% |

| | | | | | | | | |
|----------------------|---------|-----------|----------|---------|----|-----------|-----------|-----------|
| Total Costs Expected | \$7,200 | \$201,710 | \$33,710 | \$9,960 | NA | \$Unknown | \$Unknown | \$Unknown |
|----------------------|---------|-----------|----------|---------|----|-----------|-----------|-----------|

Table 2-1. (Continued) Summary of ----- AFB's Pollution Prevention Program

| Pollution Prevention Program Elements | Hazardous Waste (lbs) | | | Municipal Solid Waste (tons) | | |
|---------------------------------------|-----------------------|---------|--------|------------------------------|----------|---------|
| | Baseline Year | CY95 | | Baseline Year | CY95 | |
| Baseline Quantity | | 142,000 | | | 4,907 | |
| Goal Reduction Year End | CY96 | CY97 | CY98 | CY96 | CY97 | CY98 |
| | | CY99 | CY00 | | CY99 | CY00 |
| Goal Reduction Percent | 11% | 22% | 33% | 6% | 23% | 30% |
| | | 44% | 55% | | 39% | 45% |
| Reduction Quantity | 15,620 | 31,240 | 46,860 | 294.42 | 1,128.6 | 1,472.1 |
| | 62,480 | 78,100 | | 1,913.73 | 2,208.15 | |
| Goal | 126,380 | 110,760 | 95,140 | 4,612.58 | 3,778.39 | 3,434.9 |
| | 79,520 | 63,900 | | 2,993.27 | 2,698.85 | |

Comparison of Inventory Quantities with Baseline Quantities

| | | | | | | |
|--|----|----|----|----|----|----|
| CY96 Inventory Quantity | -- | -- | -- | -- | -- | -- |
| Reduction Quantity Achieved through CY96 | -- | -- | -- | -- | -- | -- |
| CY96 Percent Reduction Achieved | -- | -- | -- | -- | -- | -- |

Summary of Additional Requirements to Meet Reduction Goals

| | | | | | | |
|--|--------|-----------|--------|----------|-----------|---------|
| Additional Reduction | 15,620 | 31,240 | 46,860 | 294.42 | 1,128.6 | 1,492.1 |
| | 62,480 | 78,100 | | 1,913.73 | 2,208.15 | |
| Percent Remaining to Meet Reduction Goal | 11% | 22% | 33% | 6% | 23% | 30% |
| | 44% | 55% | | 39% | 45% | |
| Total Costs Expected | -- | -- | -- | -- | -- | -- |
| | -- | \$328,570 | | -- | \$778.750 | |

a CY 1992 baseline excludes quantities from fuel purchases. Source: USAF, 1995a.

b Data from FY95.

- c TRI chemical data totals are from non-exempt amounts in inventory and are inclusive of non-exempt totals for EPA 17s.
- d Measured in pounds of active ingredients.
- + No reduction achieved. Indicates amount above baseline.
- NA Not Applicable.

Each project option or action was given a code based on the program element to which the project applies (e.g., HW-1 for HW project number 1, MSW-1 for MSW project number 1, etc.). The initiating source for each option is provided in the narratives in Appendix A. The narratives identify many costs and benefits that are not represented in the tables in this section. Many assumptions for the projects were based on limited data. Prior to implementation of a project, all costs and benefits should be reviewed carefully to verify the true costs and benefits for ----- AFB.

2.1 OZONE DEPLETING SUBSTANCES (ODSS)

Goal: Eliminate the purchase of ODSs as soon as possible.
 ----- AFB is in the process of eliminating the new purchase of all pure Class I ODSs in accordance with the deadlines specified in the Air Force P2 program. The options listed in Table 2-2 are designed to eliminate the new purchase of products containing ODSs. The Bioenvironmental Engineering (BE) office at ----- AFB evaluates suitable product substitutes and assist shops in implementing the substitutions.

| Table 2-2 ODS Elimination Options | | | | | |
|-----------------------------------|---|------|------------------|---------------------|-----|
| (FY) | Project Title | ROI | Capital Costs | Benefit (lbs/yr) | OPR |
| (FY96) | ODS-1 Replace Current ODSs with Low- or No- ODS Substitutes | None | \$4,000 | 6,500 | CEV |
| (FY96) | ODS-2 Monitor ODS-using Equipment | None | \$3,200 | 6,000 | CEV |
| TOTAL | | | \$7,200 | 8,606 | |

- a Total only for known capital costs. Does not assume costs not calculated.

2.2 EPA 17 INDUSTRIAL TOXICS PROGRAM CHEMICALS

Goal: Reduce the purchase and use of EPA 17 chemicals by 50 percent by 31 December 1996 from a CY92 baseline of 37,636 pounds (lbs). The CY92 baseline does not include EPA 17 chemicals contained in fuels. This also does not include EPA 17 chemicals that are included in fuels used for fire training.

----- AFB is progressing toward the 31 December 1996 reduction goal. The base has currently achieved a cumulative reduction of 12,941 lbs, or 34 percent through CY94. To achieve the CY96 goal, ----- AFB must reduce EPA 17 purchases by 16% which is an additional 5,877 lbs. The options presented in Table 2-3 are recommendations for continued reduction and product substitutions which will assist ----- AFB in reducing the amount of EPA 17

chemical purchases beyond the Air Force P2 reduction goals. The Bioenvironmental Engineering (BE) office at ----- AFB also evaluates suitable product substitutes and assists shops in implementing the substitutions.

Table 2-3 EPA 17 Chemical Reduction Options

| (FY) Project Title | ROI | Cost ^{b,c} | Benefit (lbs/yr) | OPR |
|--|-------|-----------------------|---------------------|--------------------|
| (FY96) EPA-1 Solvent Substitution | None | \$13,560 ^c | 3,500 | P2 Subcommittee |
| (FY96) EPA-2 Solvent Recycling | 1.99a | \$19,500a | 4,850a | P2 Subcommittee |
| (FY96) EPA-3 Paint Gun Cleaner | 1.35 | \$6,000 | 1,775 | P2 Subcommittee |
| (FY96) EPA-4 HVLV Sprayer | 0.07 | \$1,650 | 1,480 | P2 Subcommittee |
| (FY96) EPA-5 Integrated Pest Management | None | 10,000 | aprox 100 | P2 Subcommittte |
| (FY96) EPA-6 Purchase and Implement Automated Paint Mixer with Electrostatic Sprayers | 2.4 | 151,000 | 2,800 | P2 Subcommittte |
| TOTAL | | \$201,710 | 14,505 | |

- a Figures represents shared options applicable to multiple processes. See Appendix A for details.
- b Total only for capital costs.
- c Total for annual cost, if no capitol costs apply.
- NC Not calculated due to insufficient data.

2.3 HAZARDOUS WASTE

Goal: Reduce HW disposal by 11 percent by CY96, 22 percent by CY97, 33 percent by CY98, 44 percent by CY95, and 55 percent by CY00 from a CY95 baseline of 142,000 lbs. ----- AFB received guidance for new HW pollution prevention metrics from [MAJCOM] on (date). The new metrics begin with a CY95 baseline of 142,000 lbs. Reduction goals are set incrementally until the year 2000 for a total reduction of 55 percent, or 78,100 lbs of hazardous waste. A summary of ----- AFB's hazardous waste generation is provided in Appendix B. Implementation of the projects listed in Table 2-4 will assist ----- AFB in reducing the amount of HW generation toward the Air Force P2 reduction goals.

Table 2-4 Hazardous Waste Reduction Options

| (FY) Project Title | ROI | Cost ^b | Benefit (lbs/yr) | OPR |
|--------------------|-------|-------------------|---------------------|-----|
| (FY96) HW-1 | 1.99a | \$19,500a | 3,700a | P2 |

| | | | | | |
|----------------------|------|-----------|-------|--|--------------|
| Solvent Recycling | | | | | Subcommittee |
| (FY96) HW-2 | None | \$13,560c | 4,200 | | P2 |
| Solvent Substitution | | | | | Subcommittee |

Table 2-4 Hazardous Waste Reduction Options (continued)

| (FY) Project Title | ROI | Cost ^b | Benefit (lbs/yr) | OPR |
|---|------|-------------------|---------------------|--------------------|
| (FY96) HW-3 On-Site Metals Treatment | 6.9 | 101,000 | 12,000 | P2 Subcommittee |
| (FY96) HW-4 Filter Analysis | 0.85 | \$12,800 | 19,400 | P2 Subcommittee |
| (FY96) HW-5 Rechargeable Batteries | 0.46 | \$300 | 3,500 | P2 Subcommittee |
| (FY96) HW-6 Alternative Paint Stripper | None | \$3,990c | 950 | P2 Subcommittee |
| (FY96) HW-7 Paint Gun Cleaner | 1.35 | \$6,000 | 1,775 | P2 Subcommittee |
| (FY96) HW-8 Hazardous Waste Tracking Team | None | \$11,520 | 25,000 | P2 Subcommittee |
| (FY96) HW-9 HVLSP Sprayer | 0.07 | \$1,650 | 3,700 | P2 Subcommittee |
| (FY96) HW-10 Purchase and Implement Automated Paint Mixer with Electrostatic Sprayers | 2.4 | \$151,000 | 4,000 | P2 Subcommittee |
| (FY96) HW-11 Replace Lead Acid Batteries with Gel-Cell Batteries | 0 | \$7,250c | 3,000 | P2 Subcommittee |
| TOTAL | | \$328,570 | 81,225 | |

a Figures represents shared options applicable to multiple processes.
See Appendix A for details.

b Total only for capital costs.

c Total for annual cost, if no capital costs apply.

2.4 MUNICIPAL SOLID WASTE

Goal: Reduce MSW disposal by 6 percent by CY96, 23 percent by CY97, 30 percent by CY98, 39 percent by CY95, and 45 percent by CY00 from a CY95 baseline of 4,907 tons. ----- AFB received

guidance for new MSW pollution prevention metrics from [MAJCOM] on (date). The new metrics begin with a CY95 baseline of 4,907 tons. Reduction goals are set incrementally until the year 2000 for a total reduction of 45 percent, or 2,208 tons of municipal solid waste. Implementation of the projects listed in Table 2-5 will assist ----- AFB in reducing the amount of MSW generated and assist in reaching the Air Force P2 reduction goals. These options are detailed in the project narratives in Appendix A.

Table 2-5 Municipal Solid Waste Reduction Options

| (FY) Project Title | ROI | Cost | Benefit (tons/yr) | OPR |
|--|-------|------------|----------------------|--------------------|
| MSW-1 Source Reduction Education Program | None | \$0 | 233 | P2 Subcommittee |
| MSW-2 Reduce collection of MFH Grass Clippings | None | \$0 | 69 | P2 Subcommittee |
| MSW-3 Point Papers from Waste Generators | None | \$0 | 558 | P2 Subcommittee |
| MSW-4 Electric Hand Dryers | 3.51 | \$108,000 | 30 | P2 Subcommittee |
| MSW-5 Improve Existing Recycling Program | 5.47 | \$107,000 | 783 | P2 Subcommittee |
| MSW-6 Wood Waste Recycling Program | 6.28 | \$30,000 | 1,000 | P2 Subcommittee |
| MSW-7 Yard Waste Composting | 21 | \$241,500 | 700 | P2 Subcommittee |
| MSW-8 Mixed Waste Composting | 8.64 | \$247,250 | 1,295b | P2 Subcommittee |
| MSW-9 Backyard Composting | 6.35 | \$45,000 | 284c | P2 Subcommittee |
| | TOTAL | \$778,750a | >2,208 | |

a total includes capital costs only.

b Includes 700 tons of MSW-7.

c Includes 69 tons of MSW-2.

2.5 AFFIRMATIVE PROCUREMENT

Goal: Ensure 100 percent of all EPA Guideline Items purchased each year contain recycled materials meeting EPA guideline standards.

Currently ----- AFB has not implemented an affirmative procurement program or a system that routinely monitors the procurement of EPA Guideline Items. The single option presented in Table 2-6 is a recommendation for developing an affirmative procurement program at ----- AFB. The program should address affirmative procurement of all current and proposed EPA Guideline Items.

Table 2-6 Affirmative Procurement Options

| (FY) Project Title | Cost | Benefit | OPR |
|--|--|---------|--------------------|
| AP-1 Develop Affirmative Procurement Program | NC | Unknown | P2 Subcommittee |
| NC | Not calculated due to insufficient data. | | |

2.6 ENERGY CONSERVATION

Goal: Reduce energy consumption by 10 percent by 31 December 1995, 20 percent by 31 December 2000, and 30 percent by 31 December 2005 from CY85 baselines. ----- AFB's CY85 baseline is 96.3 KBtu/SF. In 1995, ----- AFB's energy consumption was 98.8 KBtu/SF. They currently are not meeting their energy conservation goals.

The base Energy Management Program is managed by the Civil Engineer Squadron's Maintenance Engineering Element. Further information can be obtained from the Chief, Maintenance Engineering at (xxx) xxx-xxxx.

2.7 PESTICIDE MANAGEMENT

Goal: Reduce purchases and application of pesticides 50 percent by 31 December 2000 from a CY93 baseline of 9,636 lbs.

----- AFB is progressing toward the CY00 reduction goal. A total reduction of 4 percent of the baseline, or 377 lbs of active ingredients, was achieved in CY94. To reach the 50 percent reduction goal by CY00, ----- AFB must reduce pesticide active ingredient application by an additional 46 percent, or 4,441 lbs. Table 2-7 presents an option to assist ----- AFB in meeting this goal.

Table 2-7 Pesticide Management Options

| (FY) Project Title | ROI | Cost | Benefit (lbs/yr) | OPR |
|---|------|---------|---------------------|--------------------|
| PM-1 Integrated Pest Management Program | None | \$9,960 | >4,818 | P2 Subcommittee |
| TOTAL | | \$9,960 | >4,818 | |

2.8 TRI CHEMICALS

Goal: Reduce release and off-site transfers of TRI chemicals 50 percent by 31 December 1999 from a CY94 baseline of 16,500 pounds.

In order for ----- AFB to reach the 50 percent goal, a reduction of 8,250 lbs of TRI chemicals must be made. Implementation of the projects listed in Table 2-8 will assist ----- AFB in reducing release and off-site transfers of TRI chemicals. A summary of -----AFB's TRI chemicals is provided in Appendix C.

| (FY) Project Title | ROI | Costa | Benefit (lbs/yr) | OPR |
|--|------|-----------|------------------|--------------------|
| TRI-1 Replace Lead Acid Batteries with Gel Cell | None | \$7,250a | 500 | P2 Subcommittee |
| TRI-2 Replace ODSs | None | \$7,200a | 5,000 | P2 Subcommittee |
| TRI-3 Solvent Substitutes | None | \$13,560a | 3,500 | P2 Subcommittee |
| TRI-4 Glycol Ether Solvent Substitutes | None | \$5,700a | 5,000 | P2 Subcommittee |
| TOTAL | | \$33,710 | 14,000 | |

a Total for annual cost, if no capital costs apply.

SECTION 3
EXECUTION

This section summarizes the management actions necessary to initiate and implement options identified in Section 2. These actions are specific to each ----- AFB project. Prior to implementation, a detailed engineering cost estimate should be prepared. The costs and benefits provided in the project narratives are estimates. This section is subdivided by each of the eight program elements (ODSs, EPA 17, HW, MSW, AP, energy conservation, pesticide management, and TRI chemicals). The options chosen to help achieve the reduction goals for each program element are listed under the element, and each option has a table outlining the steps to execute the option.

3.1 OZONE DEPLETING SUBSTANCES

The Clean Air Act identified many substances that contribute to

the depletion of the Earth's stratospheric ozone layer. USAF policy outlines a plan to eliminate the purchase of newly-produced ODSs. The purchase ban takes effect on different dates for different ODS applications. ----- AFB has curtailed the new purchase of all Class I ODS refrigerants and equipment utilizing Class I ODS refrigerants, including air conditioning units and vehicles. For products containing ODSs, the [MAJCOM] goal is to eliminate all purchases as soon as possible. Table 3-1 illustrates projects which will contribute to ----- AFB achieving the USAF P2 goals while avoiding any negative mission impacts.

Table 3-1 Achieving P2 Goals: ODSs

| Action | OPR | Completion Date | |
|--|-----------------|----------------------|-------------------|
| | | Estimated Completion | Actual Completion |
| ODS-1 Replace Current Freon with Low-or No-ODS Substitute | | | |
| Identify all ODS uses (See ODS-1 narrative) | CEV | | Feb 1996 |
| Determine which systems may be able to use ODS substitutes | CEV | Jan 1997 | |
| Evaluate potential substitute products for effectiveness | CEV | Ongoing | |
| Discontinue purchase of current products | HazMat Pharmacy | Ongoing | |
| Purchase and use substitute products | HazMat Pharmacy | Ongoing | |

Table 3-1 Achieving P2 Goals: ODSs (continued)

| Action | OPR | Completion Date | |
|--|-----|--------------------------|-------------------|
| | | Estimated Completion | Actual Completion |
| ODS-2 Monitor Equipment Using ODSs | | | |
| Identify team of two individuals that will set up a system for tracking ODS-containing equipment | CEV | Feb 1997 | |
| Maintain the tracking system to identify the equipment that needs maintenance | CEV | Ongoing | |
| Commit personnel and materials to conduct routine maintenance and modifications | CEV | Jun 1997 & Ongoing | |

3.2 EPA 17 CHEMICAL PURCHASES

Controlling hazardous materials is essential to a successful P2 plan. This includes reducing the quantity and types of hazardous wastes, as well as implementing proper distribution, use, storage, and disposal. The EPA has targeted 17 chemicals and chemical categories from the list of substances identified under Title III of the Superfund Amendments and Reauthorization Act for voluntary purchase reduction. USAF has made the reductions mandatory for all bases as part of the Air Force P2 program. These chemicals will be tracked and measured against a CY92 baseline. As stated in Section 2, ---- AFB has achieved a 34 percent cumulative reduction in the purchase of EPA 17 chemicals since the CY92 baseline. To reach the reduction goals, an additional 16 percent reduction must be made. Table 3-2 illustrates management actions for options essential to reducing the purchase of EPA 17 chemicals in order to reach the Air Force P2 reduction goals.

Table 3-2 Achieving P2 Goals: EPA 17 Chemical Purchases

| Action | OPR | Completion Date | |
|---|-----|----------------------|-------------------|
| | | Estimated Completion | Actual Completion |
| EPA-1 Solvent Substitution | | | |
| Identify solvents that are used on the base that contain EPA 17 chemicals | CEV | | Feb 1996 |
| Determine potential substitutes of EPA 17 chemicals used on the base | CEV | | Feb 1996 |

Table 3-2 Achieving P2 Goals: EPA 17 Chemical Purchases (continued)

| Action | OPR | Completion Date | |
|--|-----|----------------------|-------------------|
| | | Estimated Completion | Actual Completion |
| Access and evaluate substitute chemicals for use in the different applications | CEV | Dec 1996 | |
| Begin to phase out EPA 17 chemicals | CEV | Feb 1997 | |
| Sample and analyze resultant waste for TCLP | CEV | May 1997 | |
| EPA-2 Solvent Recycling | | | |

| | | | |
|---|-----|-----------|----------|
| Evaluate the requirements for a solvent recycling unit | CEV | | Feb 1996 |
| Determine all potential paint shop users of centralized unit | CEV | | Feb 1996 |
| Identify vendor and allocate system | CEV | Oct 1996 | |
| Allocate transfer devices for shops that will use the system | CEV | Oct 1996 | |
| Begin implementation of the solvent recycling for paint shops | CEV | Jan 1997 | |
| EPA-3 Paint Gun Cleaner | | | |
| Determine all potential users on closed-loop paint gun cleaners | CEV | | Feb 1996 |
| Evaluate the applicability of cleaning system with existing equipment | CEV | Jun 1996 | |
| Evaluate potential vendors and determine cost for multiple purchase | CEV | July 1996 | |
| Purchase and install systems | CEV | Dec 1996 | |
| EPA-4 HVLP Sprayers | | | |
| Determine all potential users of HVLP sprayers | CEV | | Feb 1996 |
| Evaluate potential vendors | CEV | July 1996 | |
| Develop appropriate parameters for design and purchase of system | CEV | July 1996 | |
| Purchase and install system | CEV | Dec 1996 | |
| Train shop personnel in new procedures and monitor use | CEV | Jan 1997 | |

Table 3-2 Achieving P2 Goals: EPA 17 Chemical Purchases (continued)

| Action | OPR | Completion Date | |
|--------|-----|----------------------|-------------------|
| | | Estimated Completion | Actual Completion |

EPA-5 Integrated Pest Management

| | | |
|--|-----|----------|
| Contact state extension service for information on IPM plan, base specific | CEV | Dec 1996 |
| Access Model Pesticide Reduction Guide (to be released in Jun 1996) | CEV | Jul 1996 |
| Evaluate potential for IPM | CEV | Feb 1997 |
| Train personnel in IPM techniques | CEV | Jun 1997 |

EPA-6 Implement Automated Paint Mixer and Electrostatic Sprayers

| | | |
|--|-----------------------|----------|
| Identify automated paint mixer system and electrostatic sprayers | Corrosion Control | Jun 1995 |
| Identify funding for purchase | CEV | Jun 1996 |
| Purchase system | CEV | Sep 1996 |
| Install system | CEV/Corrosion Control | Jan 1997 |
| Train employees on proper use | CEV/Corrosion Control | Mar 1997 |

3.3 HAZARDOUS WASTE DISPOSAL

Hazardous wastes are most often regulated under the Resource Conservation and Recovery Act (RCRA) and the Toxic Substance Control Act for polychlorinated biphenyl waste. RCRA requires that a generator of RCRA hazardous waste certify that a waste minimization program is in place as part of the biennial report for hazardous waste generators. The EPA's interim final guidance, published in January 1993, identifies what is necessary to included in a program in order to comply with certification requirements. This plan should include efforts undertaken during the year to reduce the volume or toxicity of wastes generated and changes in the volume and toxicity actually achieved in comparison to previous years. Efforts listed in the HW section of this plan fulfill the requirements of RCRA and of the P2 MAP. ----- AFB must reduce hazardous waste by 55 percent to reach the 31 December 2000 goal from the updated CY95 baseline quantity. Table 3-3 lists those management actions required to implement each additional HW project and continue to reduce HW generation beyond the Air Force P2 reduction goals already achieved.

Table 3-3 Achieving P2 Goals: Hazardous Waste Disposal

| Action | OPR | Completion Date | |
|---|-----|----------------------|-------------------|
| | | Estimated Completion | Actual Completion |
| HW-1 Solvent Recycling | | | |
| Evaluate the requirements for a solvents recycling unit | CEV | | Feb 1996 |
| Determine all potential paint shop users of centralized unit | CEV | | Feb 1996 |
| Identify vendor and allocate system | CEV | Oct 1996 | |
| Allocate transfer devices for shops that will use the system | CEV | Oct 1996 | |
| Begin implementation of the solvent recycling for paint shops | CEV | Jan 1997 | |
| HW-2 Solvent Substitution | | | |
| Identify solvents that are used on the base that contain EPA 17 chemicals | CEV | | Feb 1996 |
| Determine potential substitutes of EPA 17 chemicals used on the base | CEV | | Feb 1996 |
| Access and evaluate substitute chemicals for use (by application) | CEV | Dec 1996 | |
| Begin to phase out EPA 17 chemicals | CEV | Feb 1997 | |
| Sample and analyze resultant waste for TCLP | CEV | May 1997 | |
| HW-3 On-Site Metals Treatment | | | |
| Identify all shops that could use metal removal technology | CEV | | Feb 1996 |
| Identify appropriate metal treatment system for the components and concentrations in the waste waters | CEV | | Feb 1996 |

| | | |
|---|-----|------------|
| Identify vendor and select metal treatment system | CEV | Dec 1996 |
| Possibly conduct treatability study with vendor support | CEV | Feb 1997 |
| Identify best treatment technology | CEV | April 1997 |
| Purchase and implement treatment technology | CEV | Aug 1997 |
| Identify personnel to operate the system | CEV | Aug 1997 |

Table 3-3 Achieving P2 Goals: Hazardous Waste Disposal (continued)

| Action | OPR | Completion Date | |
|---|-----|----------------------|-------------------|
| | | Estimated Completion | Actual Completion |
| HW-4 Filter Analysis | | | |
| Identify all shops that currently dispose paint overspray waste as hazardous | CEV | | Feb 1996 |
| Contract with laboratory for TCLP analysis of paint booth filters and paint waste | CEV | July 1996 | |
| Establish tracking of filter filter disposal (as hazardous waste of municipal solid waste) | CEV | Dec 1996 | |
| HW-5 Rechargeable Batteries | | | |
| Determine amount of rechargeable batteries that require purchase | CEV | Mar 1996 | |
| Determine applicability; test several flashlights with the rechargeable batteries on a two month trial period | CEV | Aug 1996 | |
| Purchase necessary batteries and chargers for use if applicable | CEV | Dec 1996 | |
| HW-6 Alternative Paint Stripper | | | |
| Identify alternative paint | CEV | | Feb 1996 |

stripper to DX-440

Evaluate effectiveness of substitute chemical CEV Aug 1996

Purchase appropriate chemical substitute for use CEV Oct 1996

HW-7 Paint Gun Cleaner

Determine all potential paint users on closed-loop paint gun cleaners CEV Feb 1996

Evaluate the applicability of cleaning system with with existing equipment CEV Jun 1996

Evaluate potential vendors and determine cost for multiple purchase CEV July 1996

Purchase and install systems CEV Dec 1996

Table 3-3 Achieving P2 Goals: Hazardous Waste Disposal (continued)

| Action | OPR | Completion Date | |
|---|-----|----------------------|-------------------|
| | | Estimated Completion | Actual Completion |
| HW-8 Hazardous Waste Tracking Team | | | |
| Scope and develop a tracking system to track hazardous waste generation at -----AFB | CEV | | April 1996 |
| Load information for 1995 and begin loading 1996 information | CEV | July 1996 | |
| Track hazardous waste information monthly | CEV | Aug 1996 | |
| Begin specified opportunity assessments for large generators | CEV | Jan 1997 | |
| Identify new generators and increased generation, determine reduction alternatives | CEV | Ongoing | |
| HW-9 HVLP Sprayer | | | |
| Determine all potential users of HVLP Sprayers | CEV | | Feb 1996 |

| | | |
|---|-----------------------|-----------|
| Evaluate potential vendors | CEV | July 1996 |
| Develop appropriate parameters for design and purchase of system | CEV | July 1996 |
| Purchase and install systems | CEV | Dec 1996 |
| Train shop personnel in new procedures and monitor use | CEV | Jan 1997 |
| HW-10 Purchase and Implement Automated Paint Mixer and Electrostatic Sprayers | | |
| Identify automated paint mixer system and electrostatic sprayers | Corrosion Control | Jun 1995 |
| Identify funding for purchase | CEV | Jun 1996 |
| Purchase system | CEV | Sep 1996 |
| Install system | CEV/Corrosion Control | Jan 1997 |
| Train employees on proper use | CEV/Corrosion Control | Mar 1997 |

HW-11 Replace Lead Acid Batteries with Gel Cell Batteries

| | | |
|---|-----|----------|
| Identify shops using lead acid batteries | CEV | Jun 1996 |
| Determine applicability to gel cell batteries | CEV | Sep 1996 |

Table 3-3 Achieving P2 Goals: Hazardous Waste Disposal (continued)

| Action | OPR | Completion Date | |
|--|-----|----------------------|-------------------|
| | | Estimated Completion | Actual Completion |
| Purchase applicable gel cell batteries to acceptable equipment | CEV | Dec 1996 | |
| Install gel cell batteries | CEV | Feb 1997 | |

3.4 MUNICIPAL SOLID WASTE DISPOSAL

MSW is generated from various sources on-base including military family housing(MFH), non-appropriated fund activities (e.g., auto hobby shop, arts and crafts, etc.), administrative offices,

commercial areas (e.g., commissary and base exchange), industrial shops, and operational squadrons. Refuse collection at ----- AFB, with the exception of refuse generated by construction contracts, is managed by CE Maintenance Engineering with separate contracts for the main base and military family housing (MFH). Resource Recovery and Recycling Program (RRRP) and the Defense Reutilization and Marketing Office (DRMO) are the two principal organizations at ----- AFB tasked with managing the collection and sale of recyclable and reusable materials. Table 3-4 outlines the actions required to implement each of the MSW projects outlined in the program section of this report.

Table 3-4 Achieving P2 Goals: Municipal Solid Waste Disposal
Completion Date

| Action | OPR | Estimated Completion | Actual Completion |
|--|-----------------|----------------------|-------------------|
| MSW-1 Source Reduction Education Program | | | |
| Design program guidelines to accomplish MSW education and communication | P2 Subcommittee | Dec 1998 | |
| Choose personnel for program team | P2 Subcommittee | Dec 1998 | |
| Establish milestones and tracking criteria for program team | P2 Subcommittee | Dec 1998 | |
| MSW-2 Reduce Collection of MFH Grass Clippings | | | |
| Develop information and strategy for communicating option to MFH residents | P2 Subcommittee | Dec 1998 | |
| Choose personnel for program team | P2 Subcommittee | Dec 1998 | |
| Establish milestones and tracking criteria for program team | P2 Subcommittee | Dec 1998 | |

Table 3-4 Achieving P2 Goals: Municipal Solid Waste Disposal (continued)
Completion Date

| Action | OPR | Estimated Completion | Actual Completion |
|---|-----------------|----------------------|-------------------|
| MSW-3 Point Papers from Waste Generators | | | |
| Develop required format and schedule for point papers | P2 Subcommittee | Feb 1998 | |
| Identify party to evaluate papers | P2 Subcommittee | Feb 1998 | |

| | | |
|--|--------------------|-----------|
| Determine facility managers which participate | P2 Subcommittee | Feb 1998 |
| Establish evaluation criteria and implementation timeline | P2 Subcommittee | Jun 1998 |
| MSW-4 Electric Hand Dryers | | |
| Identify number and placement of dryers | P2 Subcommittee | Feb 1998 |
| Evaluate potential vendors | P2 Subcommittee | Feb 1998 |
| Purchase systems and contract installation | P2 Subcommittee | Feb 1998 |
| MSW-5 Improve Existing Recycling Program | | |
| Provide communication and education materials to promote the program | P2 Subcommittee | Feb 1998 |
| Choose location most beneficial for additional receptors | P2 Subcommittee | Feb 1998 |
| Purchase additional receptors to sort office / mixed paper | P2 Subcommittee | Feb 1998 |
| Purchase additional receptors to collect aluminum cans | P2 Subcommittee | Feb 1998 |
| Develop monitoring program for recyclables collected through program | P2 Subcommittee | Feb 1998 |
| MSW-6 Wood Waste Recycling Program | | |
| Arrange for Golf Course Maintenance to lease the CE chipper | P2 Subcommittee | Jun 1998 |
| Coordinate with industrial facilities to accept accept processed chips from base | P2 Subcommittee | Sept 1998 |
| Insure contractors sort C&D wood and pallets | P2 Subcommittee | Jun 1998 |

Table 3-4 Achieving P2 Goals: Municipal Solid Waste Disposal (continued)
Completion Date

| Action | OPR | Estimated Completion | Actual Completion |
|---|-----------------|----------------------|-------------------|
| Purchase truck scale to measure wood waste quantities | P2 Subcommittee | Jun 1998 | |
| Develop system for tracking tonnage and monitoring disposal of wood waste | P2 Subcommittee | Jun 1998 | |
| MSW-7 Yard Waste Composting | | | |
| Develop program materials for education and communication on yard waste composting | P2 Subcommittee | Jul 1998 | |
| Choose source reduction team staff to implement program | P2 Subcommittee | Jul 1998 | |
| Select and purchase necessary equipment for composting process | P2 Subcommittee | Jul 1998 | |
| Develop tracking system of composting benefits to MSW disposal | P2 Subcommittee | Sept 1998 | |
| MSW-8 Mixed Waste Composting | | | |
| Develop program materials for education and communication on mixed waste composting | P2 Subcommittee | Jul 1998 | |
| Choose source reduction team staff to implement program | P2 Subcommittee | Jul 1998 | |
| Select and purchase necessary equipment for composting process | P2 Subcommittee | Jul 1998 | |
| Develop tracking system of composting benefits to MSW disposal | P2 Subcommittee | Sept 1998 | |
| MSW-9 Backyard Composting | | | |
| Develop program materials for education and communication on backyard composting | P2 Subcommittee | Jul 1998 | |
| Choose source reduction team staff to implement program | P2 Subcommittee | Jul 1998 | |

| | | |
|--|--------------------|-----------|
| Select and purchase bins necessary composting process | P2 Subcommittee | Jul 1998 |
| Develop tracking system of composting benefits to MSW disposal | P2 Subcommittee | Sept 1998 |

3.5 AFFIRMATIVE PROCUREMENT

Affirmative procurement is the process of procuring products containing recovered materials. RCRA, as amended, and EO 12873 establish federal requirements for management of MSW and the procurement of products containing recovered materials. The EPA has designated the following specific items ("guideline items") containing recovered materials for procurement:

- | | |
|--|-------------------------------|
| - Building insulation products | - Traffic cones |
| - Cement and concrete containing fly ash | - Traffic barricades |
| - Paper and paper products | - Playground surfaces |
| - Retreaded tires tracks | - Running tracks |
| - Lubricating oils | - Hydraulic mulch |
| - Ground granule furnace slag | - Yard trimming compost |
| - Engine coolants | - Office recycling containers |
| - Structural fiberboard | - Office waste receptacles |
| - Laminated paperboard | - Plastic desktop accessories |
| - Carpet | - Toner cartridges |
| - Floor tile | - Binders |
| - Patio blocks | - Plastic trash bags |

The EO requires agencies to review their specifications for these designated items and to procure materials containing recovered materials whenever possible. Establishing an affirmative procurement plan is integral to achieving this reduction goal and should include the following:

- A preference program that establishes open competition between products containing recycled and non-recycled materials
- A promotion program that actively promotes the desire to buy recycled products
- An annual review and monitoring program that evaluates the success of the affirmative procurement program

The single option in the area of affirmative procurement is the recommendation that ----- AFB develop an affirmative procurement program to incorporate the above items. Table 3-5 outlines the actions required to develop the program.

Table 3-5 Achieving P2 Goals: Affirmative Procurement

| Action | OPR | Completion Date | |
|--------|-----|----------------------|-------------------|
| | | Estimated Completion | Actual Completion |

AP-1 Develop Affirmative Procurement Program

| | | |
|---|--|----------|
| Evaluate the current status of affirmative procurement at ----- AFB | CEV, P2 Subcommittee | Dec 1996 |
| Develop and implement a program to affirmatively procure 100 percent of EPA Guideline Items | CEV, P2 Subcommittee, Logistics Organizations | Jun 1997 |
| Track and record progress toward annual achievement of affirmative procurement requirements | Contracting | Sep 1997 |

3.6 ENERGY CONSERVATION

EO 12902 and the Energy Policy Act of 1992 extended the energy conservation goals of the Federal Energy Management Improvement Act (FEMIA) of 1988. FEMIA had initially established the goal to reduce energy consumption by 10 percent per square foot in federal buildings between CY85 and CY95. The new requirements extended the FEMIA Federal Building Reduction Goal to a required reduction of 20 percent per gross square foot by 31 December 2000 and 30 percent by 31 December 2005, as measured in BTUs. ----- AFB has a proactive energy conservation program that is pursuing programs to accomplish these conservation goals. The Chief of Maintenance Engineering is responsible for the energy program, meeting Energy Conservation goals, and obtaining funding for projects. Currently, ----- AFB is 3 percent above the CY85 energy baseline. To meet their goals, reductions of 23 percent and 33 percent must be made for CY00 and CY05, respectively. ----- AFB's Energy Management Program is managed by the Civil Engineer Squadron's Maintenance Engineering Element. Further information can be obtained from the Chief, Maintenance Engineering at (xxx) xxx-xxxx.

Table 3-6 Achieving P2 Goals: Energy Conservation

| Action | OPR | Completion Date | |
|--|--------------------------|----------------------|-------------------|
| | | Estimated Completion | Actual Completion |
| Promote base-wide energy conservation awareness | CEOE and P2 Subcommittee | Ongoing | |
| Present a mock energy bill to commanders and shop chiefs, demonstrating requirements | CEOE | Sept 96 | |
| Make items available to | CEOE and P2 | Feb 97 | |

| | | |
|--|-----------------|---------|
| base populace to help conserve heating/cooling energy | Subcommittee | |
| Investigate feasibility of implementing physical controls on heating/cooling | CEOE | JUN 97 |
| Provide incentives for energy conservation | P2 Subcommittee | Sept 97 |

3.7 PESTICIDE MANAGEMENT

AF P2 programs are committed to reducing the release of pollutants into the environment by minimizing or eliminating harmful discharges to air, land, and water at the source. A key component in this process for ----- AFB will be the reduction or elimination of pesticide applications. Table 3- 6 outlines the actions needed to implement the pest management options which are necessary to achieve pollution prevention goals.

Table 3-6 Achieving P2 Goals: Pesticide Management

| Action | OPR | Completion Date | |
|--|-----------------|----------------------|-------------------|
| | | Estimated Completion | Actual Completion |
| PM-1 Integrated Pest Management Program | | | |
| Establish pest management team | P2 Subcommittee | Jun 1996 | |
| Obtain Pest Management Guide from AFCEE/EP | P2 Subcommittee | Jul 1996 | |
| Develop pest identification | P2 Subcommittee | Sep 1996 | |

Table 3-6 Achieving P2 Goals: Pesticide Management (continued)

| Action | OPR | Completion Date | |
|--|-----------------|----------------------|-------------------|
| | | Estimated Completion | Actual Completion |
| Establish tolerance levels | P2 Subcommittee | Oct 1996 | |
| Establish pest monitoring program | P2 Subcommittee | Dec 1996 | |
| Establish approved treatment processes | P2 Subcommittee | Apr 1997 | |
| Track pesticide usage reduction | P2 Subcommittee | July 1997 | |

3.8 TRI CHEMICALS

Executive Order 12856 requires all federal agencies to comply

with EPCRA and to commit resources to fulfill the intentions of the Pollution Prevention Act. Section 313 of EPCRA requires AF installations to submit annual TRI reports by 1 July each year for the previous calendar year's data. The first report covered 1994 and stands as the baseline by which the progress toward [MAJCOM] goals will be measured. [Contractor] compiled baseline TRI(EPCRA) data for ----- AFB in an August 1995 technical report. TRI chemicals for ----- AFB, including the EPA 17 chemicals, are listed in Appendix C. Table 3.7 lists the actions needed to implement the options necessary to reduce TRI chemical total releases and off-site transfers in accordance with reduction goals.

Table 3-7 Achieving P2 Goals: TRI Chemicals

| Action | OPR | Completion Date | |
|--|-----|----------------------|-------------------|
| | | Estimated Completion | Actual Completion |
| TRI-1 Replace Lead Acid Batteries with Gel Cell | | | |
| Identify shops that use lead acid batteries | CEV | Jun 1996 | |
| Determine applicability to gel cell batteries | CEV | Sep 1996 | |
| Purchase applicable gel cell batteries to acceptable equipment | CEV | Dec 1996 | |
| Install gel cell batteries | CEV | Feb 1997 | |
| TRI-2 Replace All ODS Compounds | | | |
| Implement ODS-1 and ODS-2 | CEV | Feb 1997 | |

Table 3-7 Achieving P2 Goals: TRI Chemicals (Continued)

| Action | OPR | Completion Date | |
|--|-----|----------------------|-------------------|
| | | Estimated Completion | Actual Completion |
| TRI-3 Solvent Substitutes | | | |
| Identify solvents that are used on the base that contain EPA 17 chemicals | CEV | | Feb 1996 |
| Determine potential substitutes of EPA 17 chemicals used on the base | CEV | | Feb 1996 |
| Access and evaluate substitute chemicals for use in the different applications | CEV | Dec 1996 | |
| Begin to phase out EPA | CEV | Feb 1997 | |

17 chemicals

Sample and analyze CEV May 1997
resultant waste for TCLP

TRI-4 Replace Glycol Ether Containing Materials

Identify the products that CEV Feb 1996
contain Glycol Ether and
determine the shop that
the materials are issued

Identify potential CEV Feb 1996
substitutes to Glycol
Ether containing materials

Allocate substitutes and CEV Aug 1996
test their applicability
to the cleaning processes

Identify and purchase larger CEV Dec 1996
quantities of substitute
products for use

**Recycling, Waste Prevention and Acquisition
Benefit the National Environment**

Office of the Secretary of Defense
Under Secretary of Defense (Acquisition and Technology)

July 1995

FOREWORD

Families, businesses, and communities all across America know that recycling makes sense. It saves money and it protects the environment. It's time for the Government to set an example and provide real leadership that will help create jobs and protect the environment, encouraging new markets for recycled products and new technologies.

President William J. Clinton
October 20, 1993
Statement on Signing the
Executive Order on Federal Acquisition,
Recycling and Waste Prevention

On October 20, 1993, President Clinton signed Executive Order 12873 into law. Executive Order 12873, entitled "Federal Acquisition, Recycling, and Waste Prevention," establishes two main goals for federal agencies: (1) Goal for Waste Reduction: Each agency shall establish a goal for solid waste prevention and a goal for recycling to be achieved by the year 1995, and (2) Goal for Increasing the Procurement of Recycled and Other Environmentally Preferable Products. Each agency shall strive to increase the procurement of products that are environmentally preferable or that are made with recovered materials and set annual goals to maximize the number of recycled products purchased, relative to non-recycled alternatives.

This brochure has been prepared to provide guidance on implementing the Department of Defense (DoD) Affirmative Procurement Program (APP) throughout the Department. The APP is part of the DoD environmental preference program established to meet DoD obligations under Executive Order 12873's Goal for Increasing the Procurement of Recycled and Other Environmentally Preferable Products and under the Resource Conservation and Recovery Act.

This brochure was prepared by the Office of the Under Secretary of Defense (Acquisition and Technology) in cooperation with the National Defense Center for Environmental Excellence which is operated by Concurrent Technologies Corporation (CTC).

For additional copies of this document, please contact:

Christopher J. Lynch
Environmental Attorney
National Defense Center for Environmental Excellence
Concurrent Technologies Corporation
1450 Scalp Avenue
Johnstown, Pennsylvania 15904

Tel: 814/269-2763

Fax: 814/269-2798

e-mail: lynch@ndcee.ctc.com

THE AFFIRMATIVE PROCUREMENT PROGRAM

Contents

| Section | Page |
|---|------|
| Introduction | 1 |
| Applicability..... | 3 |
| The Affirmative Procurement Program..... | 3 |
| Preference..... | 4 |
| Acquisition Planning..... | 4 |
| Promotion..... | 5 |
| Evaluation, Certification, and Verification | 5 |
| Annual Review and Report | 5 |
| Awards | 6 |
| Model Facilities Program..... | 6 |
| Environmentally Preferable Products and Services | 7 |
| Waste Prevention..... | 8 |
| Appendices | |
| Appendix A: Under Secretary of Defense (Acquisition and Technology) Memorandum, dated August 24, 1994, "Preference for Environmental Protection Agency (EPA) Guideline Items" | 9 |
| Appendix B: Executive Order 12873, dated October 20, 1993, "Federal Acquisition, Recycling and Waste Prevention" | 13 |
| Appendix C: Extract From Federal Acquisition Regulation Case 92-54: Environmentally Preferable Products..... | 25 |

Introduction

The Department of Defense environmental preference program is essential for the conservation of resources and the improvement of the national environment. The Department's overarching thrust is to reduce the amount of waste generated in its necessary operations, to recycle as large a portion of unavoidably created waste as is feasible, and then to stimulate demand for this "raw material" by being a large and active purchaser of quality products made with recycled content. The affirmative procurement program (APP), a part of DoD's environmental preference program, is required by the Resource Conservation and Recovery Act and Executive Order 12873 and is more narrowly focused to deal only with the Environmental Protection Agency-designated items for which recycled content standards have been established. The Department requires the procurement of these guideline items in its operations and actively encourages the use of other items made with recycled content when they satisfy mission requirements.

The overall recycling program was established in 1983; further impetus and wider scope was given to environmental activities by the passage of the Hazardous and Solid Waste Amendments of 1984, which required procurement preference for certain items with recycled content. The promulgation of Executive Order 12873 on October 20, 1993, further highlighted the need to actively pursue affirmative procurement of EPA-designated items and led to the current formalization of the Defense APP program.

The U.S. Government is the nation's largest consumer of goods and services. Procurement by the Department of Defense alone accounts for 2 to 3 percent of total GNP. (Pollution Prevention in the Federal Government: Guide for Developing Pollution Prevention Strategies for Executive Order 12856 and Beyond U.S. EPA, April 1994)

The Resource Conservation and Recovery Act required the Environmental Protection Agency to develop guidelines specifying standards of recycled content for certain items. EPA's "guideline items" thus form the basis on which the Department has developed the affirmative procurement program and also provide the basis on which progress in attaining program goals is measured.

The Under Secretary of Defense (Acquisition and Technology) established Department of Defense preference policy on Environmental Protection Agency guideline items in his memorandum dated August 24, 1994. This brochure incorporates the policy in that memorandum and provides additional detail and guidance on implementing the policy throughout the Department.

The head of each Executive agency shall develop and implement affirmative procurement programs in accordance with RCRA section 6002 (42 U.S.C. 6962) and this order. (Section 402, Executive Order 12873)

The purpose of the Department's affirmative procurement program is to conserve resources, encourage markets for recycled materials and to encourage manufacturers to produce quality

recycled content products. We will do this by maximizing our purchases of recycled content products designated for special attention by the Environmental Protection Agency.

The Department of Defense policy on procurement of EPA-designated items is that 100% of such purchases will meet or exceed the guideline standards unless written justification is made part of the procurement file citing at least one of the following conditions:

- the product is not available competitively within a reasonable timeframe;
- the product does not meet appropriate performance standards; or
- the product is only available at an unreasonable price.

Executive Order 12873 required the designation of a Defense Environmental Executive and the Deputy Under Secretary of Defense (Environmental Security) has been appointed to that important post. That office is responsible for:

- coordinating all environmental programs in the areas of procurement and acquisition, standards and specification review, facilities management, waste prevention and recycling, and logistics;
- participating in the interagency development of a Federal plan to:
 - (1) create an awareness and outreach program for the private sector to facilitate markets for environmentally preferable and recycled products and services, promote new technologies, improve awareness about Federal efforts in this area, and expedite Defense efforts to procure new products identified under the Order;
 - (2) establish incentives, provide guidance and coordinate appropriate educational programs for Defense employees; and
 - (3) coordinate the development of standard Defense reports required by the Order.

This Administration is determined to strengthen the role of the Federal Government as an enlightened, environmentally conscious and concerned consumer. (Introduction to Executive Order 12873)

- reviewing Defense programs and acquisitions to ensure compliance with the Order.

Applicability

This guidance is applicable to all Department of Defense employees, military and civilian, and has especial relevance to those echelons generating requirements for goods and services and to purchasing activities. Ultimate success in improving the environment requires each Defense member to "think green" in all their actions. The Department's waste prevention, recycling, and affirmative procurement programs thus apply to every CONUS installation and every employee

on those installations. Outside CONUS, the more stringent of local requirements or CONUS requirements apply.

The Affirmative Procurement Program

The Department of Defense affirmative procurement program encompasses the Environmental Protection Agency items designated in accordance with Section 6002(e) of the Resource Conservation and Recovery Act. The program, as it relates to the guideline items, consists of a procurement preference element; a promotion element; an element covering procedures for evaluation, certification, and verification; and procedures for annual review and reporting. The program applies to currently designated items, but is structured to incorporate additional items as they are approved by EPA.

Agencies shall establish affirmative procurement programs for all designated EPA guideline items purchased by their agency. For newly designated items, agencies shall revise their internal programs within one year from the date EPA designated the new items. (Section 402(a), Executive Order 12873)

Preference

The policy on the "preference" element of the program was promulgated in Under Secretary of Defense (Acquisition and Technology) memorandum of August 24, 1994 (Appendix A). Briefly stated, the policy is that 100% of Defense purchases of guideline items must meet or exceed the guideline standards unless very narrowly drawn conditions are met. This policy is implemented in the Federal Acquisition Regulation which makes such procurements mandatory in the absence of the narrowly drawn conditions.

For the currently designated EPA guideline items ... agencies shall ensure that their affirmative procurement programs require that 100 percent of their purchases of products meet or exceed the EPA guideline standards ...(Section 402(b), Executive Order 12873)

In their purchases of guideline items, Defense components should consider established Federal supply sources as a competitive source to fill their requirements. These established sources include the General Services Administration, the supply centers operated by the Defense Logistics Agency and the Government Printing Office. Products obtained from these sources will meet or exceed minimum content standards set by EPA and, for paper and paper products obtained from CSA, will reduce component reporting burden. GSA and certain of the DLA supply centers also publish "green" or environmentally preferable catalogues which help in the selection of environmentally preferable products not on the designated list. This provides an opportunity for DoD components to increase the scope of their recycled content purchases and support the broader goal of Defense environmental preference.

See Appendix C for a listing of the current EPA-designated items.

Acquisition Planning

Environmental and affirmative procurement program elements are also required to be a part of acquisition planning. Planners, program managers and acquisition managers must all take an active part in the process. This will enhance waste prevention efforts, assure that waste generated can be recycled if possible and that ultimate disposal is considered. Plans, work statements, specifications and other product descriptions will consider as a minimum the following factors:

- elimination of virgin material requirements;
- use of recovered materials;
- reuse of product;
- life-cycle cost;
- recyclability;
- use of environmentally preferable products;
- waste prevention (including toxicity reduction or elimination); and
- ultimate disposal

Promotion

The "promotion" of the recycling and affirmative procurement program is part of the mission of the Defense Environmental Executive and the Defense components. Promotion consists of: supporting and encouraging the Department's extensive recycling efforts where materials are recovered and returned to productive use; making manufacturers and suppliers aware of the Department's need for recycled content products; supporting the program before Congressional committees and State and local governing bodies; and educating employees throughout the Department on the benefits of recycling and of procuring and using products made with recycled content. The Defense Environmental Executive and Defense components will internally and externally promote the desire to buy recycled content products through:

- educational efforts at the annual Joint Services Recycling Workshop (a gathering of Defense recycling coordinators from all across the country);
- including explicit recovered materials preference standards for EPA-designated items in appropriate solicitations for bids, statements of work and contract negotiations;
- providing promotional materials regarding the Department's recovered materials preference program in newsletters and other internal documents and at appropriate meetings and conferences; and
- providing information through such electronic means as the Defense Environmental Network and Information Exchange (DENIX).

The use of recycled and environmentally preferable products and services by the Federal Government can spur private sector development of new technologies and use of such products, thereby creating business and employment opportunities and enhancing regional and local economies and the national economy. (Introduction to Executive Order 12873)

Evaluation, Certification, and Verification

The "vendor certification" element becomes a part of the contract requirement for guideline items under the affirmative procurement program. Contractors are required to estimate the dollar amount of recovered content when bidding on specified contracts; they are subsequently required to certify the amount of recycled content actually used in fulfilling the contract. For EPA-designated items obtained through established Federal supply sources such as GSA and DLA, other Defense components are not required to perform verification sampling since those organizations will take care of the validity check requirement.

Annual Review and Report

The "annual review and report" is a joint responsibility of the Defense Environmental Executive and the Defense components. The review and report will be carried out individually by the Defense components, with results reported to the Defense Environmental Executive. The primary method for capturing data required for reporting on guideline items under the affirmative procurement program will be the Defense Environmental Security Corporate Information Management system (DESCIM). That system, which is currently being developed, will have defined data elements for EPA-designated items. Pending full development and implementation, the Solid Waste Annual Reporting System (SWARS) has been selected as the DoD-wide "transition system" with implementation scheduled for October 1996. The SWARS contains reporting requirements for the current EPA guideline items, and definitions for additional items will be added as they are approved. The information the system will report is total dollar value of item procured and dollar value of material purchased with recycled content. Pending operation of these systems, the DoD components are responsible for capturing data reported by contractors on recycled content purchases in a manner suitable to their individual management structures. The information is required to be summarized and provided annually to the Defense Environmental Executive following the reporting format in the annual reporting call memorandum.

Awards

The Department has a widely respected and very competitive annual Environmental Awards Program. Recycling is one of the categories of award in the program now; it is our intent to emphasize this aspect in future awards programs. Winners in this competition are eligible to participate in other Federal awards programs, including government-wide competitions sponsored by the White House.

A government-wide award will be presented annually by the White House ... [and] ... Each agency shall develop an internal agency-wide awards program, as appropriate, to reward its most innovative environmental programs. (Sections 801 & 802 Executive Order 12873)

Model Facilities Program

The Department has identified model facilities under its Model Facility Program. These installations have comprehensive waste prevention and recycling programs, electronic systems for the procurement and tracking of recycled content products, and demonstrate environmental leadership in other areas. These model facilities will be prime competitors in the Environmental Awards Program, and will focus attention on installation accomplishments in environmental improvement.

Each Executive department and major procuring agency shall establish model facility demonstration programs... (Section 704, Executive Order 12873)

Environmentally Preferable Products and Services

Section 503 of Executive Order 12873 requires the Environmental Protection Agency to issue guidance recommending principles for Executive Agency use in making determinations for the preference and purchase of environmentally preferable products and services. "Environmentally preferable" is defined as having a lesser effect on human health and the environment when compared with competing products or services serving the same purpose. Comparisons made in determining environmental preferability may include things such as materials acquisition, production, manufacturing, packaging, distribution, reuse, operation and maintenance, and disposal.

The Department of Defense has been working with the EPA in developing the required guidance. It is expected to take the form of general principles and more narrowly-focused experience-based guidance developed from lessons learned from a series of pilot acquisition projects. No matter the specific form this guidance may ultimately take, the DoD supports incorporating environmental factors as early as is feasible in the planning and acquisition process. Life-cycle costs are also an important factor in drawing environmentally preferable comparisons.

To assure that both environmental factors and life-cycle costs receive appropriate consideration, the Department is revising its acquisition regulations (notably DoDD 5000.1 and DoDI 5000.2) to highlight this requirement. Since unique DoD specifications and standards have, in the past, sometimes served as an obstacle to using environmentally preferable products, we are revising this guidance to specify that such products will be used wherever possible without jeopardizing the use of the item. We are also moving toward greatly increased use of performance standards, and this shift will bring us into line with the current "best practices" of the private sector and should increase our use of environmentally preferable products.

The Department thus fully supports the environmentally preferable ethic, and pledges to strive to increase the proportion of these goods and services in its total acquisition mix. Defense components will look at all their requirements, and constantly seek to increase the EPP participation rate when consistent with mission and life-cycle cost considerations.

Where applicable, Executive agencies shall review and revise federal and military specifications, product descriptions and standards to enhance Federal procurement of products made from recovered materials or that are environmentally preferable. (Section 501, Executive Order 12873)

Waste Prevention

The Department is actively pursuing waste prevention on all fronts. It has established a solid waste reduction goal of 50% by calendar-year 1999, using a 1992 calendar-year baseline; it encourages steps such as double-sided copying and requires that contracts, grants and cooperative agreements which result in printed deliverables be printed double-sided on recycled content paper. The Department is also well along in the process of developing and implementing an electronic commerce/electronic data interchange system which will materially reduce paper requirements in the procurement process. All of these steps are expected to prevent waste; pollution will also be prevented as the flow of materials to landfills is reduced.

Agency affirmative procurement programs, to the maximum extent practicable, shall encourage that:

- (1) documents be transferred electronically,***
- (2) all government documents printed internally be printed double-sided, and***
- (3) contracts, grants, and cooperative agreements ... be printed double-sided on recycled paper ...***

(Section 402(d)(11)(2) & (3) Executive Order 12873)

APPENDIX A

UNDER SECRETARY OF DEFENSE (ACQUISITION AND
TECHNOLOGY) MEMORANDUM, DATED AUGUST 24, 1994,
"PREFERENCE FOR ENVIRONMENTAL PROTECTION AGENCY (EPA)
GUIDELINE ITEMS"

THE UNDER SECRETARY OF DEFENSE
3010 DEFENSE PENTAGON
WASHINGTON, DC 20301-3010

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS
CHAIRMAN OF THE JOINT CHIEFS OF STAFF
UNDER SECRETARY OF DEFENSE (POLICY)
DIRECTOR, DEFENSE RESEARCH AND ENGINEERING
ASSISTANT SECRETARIES OF DEFENSE
COMPTROLLER
GENERAL COUNSEL
INSPECTOR GENERAL
DIRECTOR, OPERATIONAL TEST AND EVALUATION
ASSISTANTS TO THE SECRETARY OF DEFENSE
DIRECTOR, ADMINISTRATION AND MANAGEMENT
DIRECTORS OF THE DEFENSE AGENCIES

SUBJECT: Preference for Environmental Protection Agency (EPA) Guideline Items

Aug 25 1994

Executive Order 12873 and Section 6002 of the Resource Conservation and Recovery Act (42 U.S.C. 6962) require Federal agencies to establish preference programs for all designated EPA guideline items purchased. The currently designated EPA guideline items are: concrete and cement containing fly ash, recycled paper products, re-refined lubricating oil, retread tires, and insulation containing recovered materials.

To comply with the requirements of Executive Order 12873 and Section 6002 the Resource Conservation and Recovery Act as they pertain to these programs, it is Department of Defense policy to require that 100 percent of purchases of the designated items meet or exceed the EPA guideline standards.

The only exception to this preference in the purchase of guideline items requires a written justification that cites at least one of the following condition:

- the product is not available competitively within a reasonable time frame;
- the product does not meet appropriate performance standards; or
- the product is only available at an unreasonable price.

The Department of Defense strongly supports the use of quality products made with recycled contents. Our presence in the market as a large and active consumer will provide economic incentive for both recyclers and manufacturers and will help institutionalize the recycling ethic in American business. This will make an important difference in the Department's efforts to increase our national environmental security.

Please communicate this preference policy on guideline items to both your requirements generating and your procuring activities.

R. Noel Longuemare
Principal Deputy Under Secretary of
Defense (Acquisition & Technology)

APPENDIX B

EXECUTIVE ORDER 12873, DATED OCTOBER 20, 1993, "FEDERAL
ACQUISITION, RECYCLING AND WASTE PREVENTION"

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Title 3--Executive Order 12873 of October 22, 1993

The President: Federal Acquisition, Recycling, and Waste Prevention

WHEREAS, the Nation's interest is served when the Federal Government can make more efficient use of natural resources by maximizing recycling and preventing waste wherever possible;

WHEREAS, this Administration is determined to strengthen the role of the Federal Government as an enlightened, environmentally conscious and concerned consumer;

WHEREAS, the Federal Government should -- through cost-effective waste prevention and recycling activities -- work to conserve disposal capacity, and serve as a model in this regard for private and other public institutions; and

WHEREAS, the use of recycled and environmentally preferable products and services by the Federal Government can spur private sector development of new technologies and use of such products, thereby creating business and employment opportunities and enhancing regional and local economies and the national economy;

NOW, THEREFORE, I, WILLIAM J. CLINTON, by the authority vested in me as President by the Constitution and the laws of the United States of America, including the Solid Waste Disposal Act, Public Law 89-272, 79 Stat. 997, as amended by the Resource Conservation and Recovery Act ("RCRA"), Public Law 94-580, 90 Stat. 2795 as amended (42 U.S.C. 6901-6907), and section 301 of title 3, United States Code, hereby order as follows:

PART I -- PREAMBLE

Section 101. Consistent with the demands of efficiency and cost effectiveness, the head of each Executive agency shall incorporate waste prevention and recycling in the agency's daily operations and work to increase and expand markets for recovered materials through greater Federal Government preference and demand for such products.

Sec. 102. Consistent with policies established by Office of Federal Procurement Policy ("OFPP") Policy Letter 92-4, agencies shall comply with executive branch policies for the acquisition and use of environmentally preferable products and services and implement cost-effective procurement preference programs favoring the purchase of these products and services.

Sec. 103. This order creates a Federal Environmental Executive and establishes high-level Environmental Executive positions within each agency to be responsible for expediting the implementation of this order and statutes that pertain to this order

PART 2 -- DEFINITIONS

For purposes of this order:

Sec. 201. "Environmentally preferable" means products or services that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose. This comparison may consider raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance, or disposal of the product or service. (* Page 54912)

Sec. 202. "Executive agency" or "agency" means an Executive agency as defined in 5 U.S.C. 105. For the purpose of this order, military departments, as defined in 5 U.S.C. 102, are covered under the auspices of the Department of Defense.

Sec. 203. "Postconsumer material" means a material or finished product that has served its intended use and has been discarded for disposal or recovery, having completed its life as a consumer item. "Postconsumer material" is a part of the broader category of "recovered material".

Sec. 204. "Acquisition" means the acquiring by contract with appropriated funds for supplies or services (including construction) by and for the use of the Federal Government through purchase or lease, whether the supplies or services are already in existence or must be created, developed, demonstrated and evaluated. Acquisition begins at the point when agency needs are established and includes the description of requirements to satisfy agency needs, solicitation and selection of sources, award of contracts, contract financing, contract performance, contract administration and those technical and management functions directly related to the process of fulfilling agency needs by contract.

Sec. 205. "Recovered materials" means waste materials and by-products which have been recovered or diverted from solid waste, but such term does not include those materials and by-products generated from, and commonly reused within, an original manufacturing process (42 U.S.C. 6903 (19)).

Sec. 206. "Recyclability" means the ability of a product or material to be recovered from, or otherwise diverted from, the solid waste stream for the purpose of recycling.

Sec. 207. "Recycling" means the series of activities, including collection, separation, and processing, by which products or other materials are recovered from the solid waste stream for

use in the form of raw materials in the manufacture of new products other than fuel for producing heat or power by combustion.

Sec. 208. "Waste prevention," also known as "source reduction," means any change in the design, manufacturing, purchase or use of materials or products (including packaging) to reduce their amount or toxicity before they become municipal solid waste. Waste prevention also refers to the reuse of products or materials.

Sec. 209. "Waste reduction" means preventing or decreasing the amount of waste being generated through waste prevention, recycling, or purchasing recycled and environmentally preferable products.

Sec. 210. "Life Cycle Cost" means the amortized annual cost of a product, including capital costs, installation costs, operating costs, maintenance costs and disposal costs discounted over the lifetime of the product.

Sec. 211. "Life Cycle Analysis" means the comprehensive examination of a product's environmental and economic effects throughout its lifetime including new material extraction, transportation, manufacturing, use, and disposal.

PART 3 -- THE ROLE OF THE FEDERAL ENVIRONMENTAL EXECUTIVE AND AGENCY ENVIRONMENTAL EXECUTIVES

Sec. 301. Federal Environmental Executive. (a) A Federal Environmental Executive shall be designated by the President and shall be located within the Environmental Protection Agency ("EPA"). The Federal Environmental Executive shall take all actions necessary to ensure that the agencies comply with the requirements of this order and shall generate an annual report to the Office of Management and Budget ("OMB"), at the time of agency budget submissions, on the actions taken by the agencies to comply with the requirements of this order. In carrying out his or her functions, the (* Page 54913) Federal Environmental Executive shall consult with the Director of the White House Office on Environmental Policy.

(b) Staffing. A minimum of four (4) full time staff persons are to be provided by the agencies listed below to assist the Federal Environmental Executive, one of whom shall have experience in specification review and program requirements, one of whom shall have experience in procurement practices, and one of whom shall have experience in solid waste prevention and recycling. These four staff persons shall be appointed and replaced as follows:

(1) a representative from the Department of Defense shall be detailed for not less than one year and no more than two years;

(2) a representative from the General Services Administration ("GSA") shall be detailed for not less than one year and no more than two years;

(3) a representative from EPA shall be detailed for not less than one year and no more than two years; and

(4) a representative from one other agency determined by the Federal Environmental Executive shall be detailed on a rotational basis for not more than one year.

(c) Administration. Agencies are requested to make their services, personnel and facilities available to the Federal Environmental Executive to the maximum extent practicable for the performance of functions under this order.

(d) Committees and Work Groups. The Federal Environmental Executive shall establish committees and work groups to identify, assess, and recommend actions to be taken to fulfill the goals, responsibilities, and initiatives of the Federal Environmental Executive. As these committees and work groups are created, agencies are requested to designate appropriate personnel in the areas of procurement and acquisition, standards and specifications, electronic commerce, facilities management, waste prevention, and recycling, and others as needed to staff and work on the initiatives of the Executive.

(e) Duties. The Federal Environmental Executive, in consultation with the Agency Environmental Executives, shall:

(1) identify and recommend initiatives for government-wide implementation that will promote the purposes of this order, including:

(A) the development of a federal plan for agency implementation of this order and appropriate incentives to encourage the acquisition of recycled and environmentally preferable products by the Federal Government;

(B) the development of a federal implementation plan and guidance for instituting economically efficient federal waste prevention, energy and water efficiency programs, and recycling programs within each agency; and

(C) the development of a plan for making maximum use of available funding assistance programs;

(2) collect and disseminate information electronically concerning methods to reduce waste, materials that can be recycled, costs and savings associated with waste prevention and recycling, and current market sources of products that are environmentally preferable or produced with recovered materials;

(3) provide guidance and assistance to the agencies in setting up and reporting on agency programs and monitoring their effectiveness; and

(4) coordinate appropriate government-wide education and training programs for agencies .

Sec. 302. Agency Environmental Executives. Within 90 days after the effective date of this order, the head of each Executive department and major procuring agency shall designate an Agency Environmental Executive from among his or her staff, who serves at a level no lower than at the Deputy Assistant (* Page 54914) Secretary level or equivalent. The Agency Environmental Executive will be responsible for:

(a) coordinating all environmental programs in the areas of procurement and acquisition, standards and specification review, facilities management, waste prevention and recycling, and logistics;

(b) participating in the interagency development of a Federal plan to:

(1) create an awareness and outreach program for the private sector to facilitate markets for environmentally preferable and recycled products and services, promote new technologies, improve awareness about federal efforts in this area, and expedite agency efforts to procure new products identified under this order;

(2) establish incentives, provide guidance and coordinate appropriate educational programs for agency employees; and

(3) coordinate the development of standard agency reports required by this order;

(c) reviewing agency programs and acquisitions to ensure compliance with this order.

PART 4 -- ACQUISITION PLANNING AND AFFIRMATIVE PROCUREMENT PROGRAMS

Sec. 401. Acquisition Planning. In developing plans, drawings, work statements, specifications, or other product descriptions, agencies shall consider the following factors: elimination of virgin material requirements; use of recovered materials; reuse of product; life cycle cost; recyclability; use of environmentally preferable products; waste prevention (including toxicity reduction or elimination); and ultimate disposal, as appropriate. These factors should be considered in acquisition planning for all procurements and in the evaluation and award of contracts, as appropriate. Program and acquisition managers should take an active role in these activities.

Sec. 402. Affirmative Procurement Programs. The head of each Executive agency shall develop and implement affirmative procurement programs in accordance with RCRA section 6002 (42 U.S.C. 6962) and this order. Agencies shall ensure that responsibilities for preparation, implementation and monitoring of affirmative procurement programs are shared between the program personnel and procurement personnel. For the purposes of all purchases made pursuant to this order, EPA, in consultation with such other Federal agencies as appropriate, shall

endeavor to maximize environmental benefits, consistent with price, performance and availability considerations, and shall adjust bid solicitation guidelines as necessary in order to accomplish this goal.

(a) Agencies shall establish affirmative procurement programs for all designated EPA guideline items purchased by their agency. For newly designated items, agencies shall revise their internal programs within one year from the date EPA designated the new items.

(b) For the currently designated EPA guideline items, which are: (i) concrete and cement containing fly ash; (ii) recycled paper products; (iii) re-refined lubricating oil; (iv) retread tires; and (v) insulation containing recovered materials; and for all future guideline items, agencies shall ensure that their affirmative procurement programs require that 100 percent of their purchases of products meet or exceed the EPA guideline standards unless written justification is provided that a product is not available competitively within a reasonable time frame, does not meet appropriate performance standards, or is only available at an unreasonable price.

(c) The Agency Environmental Executives will track agencies' purchases of designated EPA guideline items and report agencies' purchases of such guideline items to the Federal Environmental Executive. Agency Environmental Executives will be required to justify to the Federal Environmental Executive as to why the item(s) have not been purchased or submit a (* Page 54915) plan for how the agencies intend to increase their purchases of the designated item(s).

(d) Agency affirmative procurement programs, to the maximum extent practicable, shall encourage that:

(1) documents be transferred electronically,

(2) all government documents printed internally be printed double-sided, and

(3) contracts, grants, and cooperative agreements issued after the effective date of this order include provisions that require documents to be printed double-sided on recycled paper meeting or exceeding the standards established in this order or in future EPA guidelines.

Sec. 403. Procurement of Existing Guideline Items. Within 90 days after the effective date of this order, the head of each Executive agency that has not implemented an affirmative procurement program shall ensure that the affirmative procurement program has been established and is being implemented to the maximum extent practicable.

Sec. 404. Electronic Acquisition System. To reduce waste by eliminating unnecessary paper transactions in the acquisition process and to foster accurate data collection and reporting of agencies' purchases of recycled content and environmentally preferred products, the executive

branch will implement an electronic commerce system consistent with the recommendations adopted as a result of the National Performance Review.

PART 5 -- STANDARDS, SPECIFICATIONS AND DESIGNATION OF ITEMS

Sec. 501. Specifications, Product Descriptions and Standards. Where applicable, Executive agencies shall review and revise federal and military specifications, product descriptions and standards to enhance Federal procurement of products made from recovered materials or that are environmentally preferable. When converting to a Commercial Item Description (CID), agencies shall ensure that environmental factors have been considered and that the CID meets or exceeds the environmentally preferable criteria of the government specification or product description. Agencies shall report annually on their compliance with this section to the Federal Environmental Executive for incorporation into the annual report to OMB referred to in section 301 of this order.

(a) If an inconsistency with RCRA Section 6002 or this order is identified in a specification, standard, or product description, the Federal Environmental Executive shall request that the Environmental Executive of the pertinent agency advise the Federal Environmental Executive as to why the specification cannot be revised or submit a plan for revising it within 60 days.

(b) If an agency is able to revise an inconsistent specification but cannot do so within 60 days, it is the responsibility of that agency's Environmental Executive to monitor and implement the plan for revising it.

Sec. 502. Designation of Items that Contain Recovered Materials. In order to expedite the process of designating items that are or can be made with recovered materials, EPA shall institute a new process for designating these items in accordance with RCRA section 6002(e) as follows.

(a) EPA shall issue a Comprehensive Procurement Guideline containing designated items that are or can be made with recovered materials.

(1) The proposed guideline shall be published for public comment in the Federal Register within 180 days after the effective date of this order and shall be updated annually after publication for comment to include additional items.

(2) Once items containing recovered materials have been designated by EPA through the new process established pursuant to this section and in compliance with RCRA section 6002, agencies shall modify their (* Page 54916) affirmative procurement programs to require that, to the maximum extent practicable, their purchases of products meet or exceed the EPA guideline standards unless written justification is provided that a product is not available competitively, not available within a reasonable time frame, does not meet appropriate performance standards, or is only available at an unreasonable price.

(b) Concurrent with the issuance of the Comprehensive Procurement Guideline required by section 502(a) of this order, EPA shall publish for public comment in the Federal Register Recovered Material Advisory Notice(s) that present the range of recovered material content levels within which the designated recycled items are currently available. These levels shall be updated periodically after publication for comment to reflect changes in market conditions.

Sec 503. Guidance for Environmental Preferable Products In accordance with this order, EPA shall issue guidance that recommends principles that Executive agencies should use in making determinations for the preference and purchase of environmentally preferable products.

(a) Proposed guidance shall be published for public comment in the Federal Register within 180 days after the effective date of this order, and may be updated after public comment, as necessary, thereafter. To the extent necessary, EPA may issue additional guidance for public comment on how the principles can be applied to specific product categories.

(b) Once final guidance for environmentally preferable products has been issued by EPA, Executive agencies shall use these principles, to the maximum extent practicable, in identifying and purchasing environmentally preferable products and shall modify their procurement programs by reviewing and revising specifications, solicitation procedures, and policies as appropriate.

Sec. 504. Minimum Content Standard for Printing and Writing Paper. Executive agency heads shall ensure that agencies shall meet or exceed the following minimum materials content standards when purchasing or causing the purchase of printing and writing paper:

(a) For high speed copier paper, offset paper, forms bond, computer printout paper, carbonless paper, file folders, and white woven envelopes, the minimum content standard shall be no less than 20 percent postconsumer materials beginning December 31, 1994. This minimum content standard shall be increased to 30 percent beginning on December 31, 1998.

(b) For other uncoated printing and writing paper, such as writing and office paper, book paper, cotton fiber paper, and cover stock, the minimum content standard shall be 50 percent recovered materials, including 20 percent postconsumer materials beginning on December 31, 1994. This standard shall be increased to 30 percent beginning on December 31, 1998.

(c) As an alternative to meeting the standards in sections 504(a) and (b), for all printing and writing papers, the minimum content standard shall be no less than 50 percent recovered materials that are a waste material byproduct of a finished product other than a paper or textile product which would otherwise be disposed of in a landfill, as determined by the State in which the facility is located

(1) The decision not to procure recycled content printing and writing paper meeting the standards specified in this section shall be based solely on a determination by the contracting officer that a

satisfactory level of competition does not exist, that the items are not available within a reasonable time period, or that the available items fail to meet reasonable performance standards established by the agency or are only available at an unreasonable price.

(2) Each agency should implement waste prevention techniques, as specified in section 402(d) of this order, so that total annual expenditures for recycled content printing and writing paper do not exceed current annual budgets for paper products as measured by average annual expenditures, adjusted for inflation based on the Consumer Price Index or other suitable (*Page 54917) indices. In determining a target budget for printing and writing paper, agencies may take into account such factors as employee increases or decreases, new agency or statutory initiatives, and episodic or unique requirements (e.g., census).

(3) Effective immediately, all agencies making solicitations for the purchase of printing and writing paper shall seek bids for paper with postconsumer material or recovered waste material as described in section 504(c).

Sec. 505. Revision of Brightness Specifications and Standards. The General Services Administration and other Federal agencies are directed to identify, evaluate and revise or eliminate any standards or specifications unrelated to performance that present barriers to the purchase of paper or paper products made by production processes that minimize emissions of harmful byproducts. This evaluation shall include a review of unnecessary brightness and stock clause provisions, such as lignin content and chemical pulp requirements. The GSA shall complete the review and revision of such specifications within six months after the effective date of this order, and shall consult closely with the Joint Committee on Printing during such process. The GSA shall also compile any information or market studies that may be necessary to accomplish the objectives of this provision.

Sec. 506. Procurement of Re-refined Lubricating Oil and Retread Tires. Within 180 days after the effective date of this order, agencies shall implement the EPA procurement guidelines for re-refined lubricating oil and retread tires.

(a) Commodity managers shall finalize revisions to specifications for re-refined oil and retread tires, and develop and issue specifications for tire retreading services, as commodity managers shall take affirmative steps to procure these items in accordance with RCRA section 6002.

(b) Once these items become available, fleet managers shall take affirmative steps to procure these items in accordance with RCRA section 6002.

Sec. 507. Product Testing. The Secretary of Commerce, through the National Institute of Standards and Technology ("NIST"), shall establish a program for testing the performance of products containing recovered materials or deemed to be environmentally preferable. NIST shall work with EPA, GSA and other public and private sector organizations that conduct appropriate

life cycle analyses to gather information that will assist agencies in making selections of products and services that are environmentally preferable.

(a) NIST shall publish appropriate reports describing testing programs, their results, and recommendations for testing methods and related specifications for use by Executive agencies and other interested parties.

(b) NIST shall coordinate with other Executive and State agencies to avoid duplication with existing testing programs.

PART 6 -- AGENCY GOALS AND REPORTING REQUIREMENTS

Sec. 601. Goals for Waste Reduction. Each agency shall establish a goal for solid waste prevention and a goal for recycling to be achieved by the year 1995. These goals shall be submitted to the Federal Environmental Executive within 180 days after the effective date of this order. Progress on attaining these goals shall be reported by the agencies to the Federal Environmental Executive for the annual report specified in section 301 of this order.

Sec. 602. Goal for Increasing the Procurement of Recycled and Other Environmentally Preferable Products. Agencies shall strive to increase the procurement of products that are environmentally preferable or that are made with recovered materials and set annual goals to maximize the number of recycled products purchased, relative to non-recycled alternatives. (* Page 54918)

Sec. 603. Review of Implementation. The President's Council on Integrity and Efficiency ("PCIE") will request that the Inspectors General periodically review agencies' affirmative procurement programs and reporting procedures to ensure their compliance with this order.

PART 7 -- APPLICABILITY AND OTHER REQUIREMENTS

Sec. 701. Contractor Operated Facilities. Contracts that provide for contractor operation of a government-owned or leased facility, awarded after the effective date of this order, shall include provisions that obligate the contractor to comply with the requirements of this order within the scope of its operations. In addition, to the extent permitted by law and where economically feasible, existing contracts should be modified.

Sec. 702. Real Property Acquisition and Management. Within 90 days after the effective date of this order, and to the extent permitted by law and where economically feasible, Executive agencies shall ensure compliance with the provisions of this order in the acquisition and management of federally owned and leased space. GSA and other Executive agencies shall also include environmental and recycling provisions in the acquisition of all leased space and in the construction of new federal buildings.

Sec. 703. Retention of Funds. Within 90 days after the effective date of this order, the Administrator of GSA shall develop a legislative proposal providing authority for Executive agencies to retain a share of the proceeds from the sale of materials recovered through recycling or waste prevention programs and specifying the eligibility requirements for the materials being recycled.

Sec. 704. Model Facility Programs. Each Executive department and major procuring agency shall establish model facility demonstration programs that include comprehensive waste prevention and recycling programs and emphasize the procurement of recycled and environmentally preferable products and services using an electronic data interchange (EDI) system.

Sec. 705. Recycling Programs. Each Executive agency that has not already done so shall initiate a program to promote cost effective waste prevention and recycling of reusable materials in all of its facilities. The recycling programs implemented pursuant to this section must be compatible with applicable State and local recycling requirements. Federal agencies shall also consider cooperative ventures with State and local governments to promote recycling and waste reduction in the community.

PART 8 -- AWARENESS

Sec. 801. Agency Awards Program. A government-wide award will be presented annually by the White House to the best, most innovative program implementing the objectives of this order to give greater visibility to these efforts so that they can be incorporated government-wide.

Sec. 802. Internal Agency Awards Programs. Each agency shall develop an internal agency--wide awards program, as appropriate, to reward its most innovative environmental programs. Winners of agency--wide awards will be eligible for the White House award program.

PART 9 -- REVOCATION, LIMITATION AND IMPLEMENTATION

Sec. 901. Executive Order No. 12780, dated October 31, 1991, is hereby revoked.

Sec. 902. This order is intended only to improve the internal management of the executive branch and is not intended to create any right or benefit, substantive or procedural, enforceable at law by a party against the United States, its agencies, its officers, or any other person (* Page 54919)

Sec. 903. The policies expressed in this order, including the requirements and elements for effective agency affirmative procurement programs, shall be implemented and incorporated in the Federal Acquisition Regulation (FAR) within 180 days after the effective date of this order. The implementation language shall consist of providing specific direction and guidance on agency programs for preference, promotion, estimation, certification, reviewing and monitoring.

Sec. 904. This order shall be effective immediately.

/s/ WILLIAM J. CLINTON
THE WHITE HOUSE,
October 20, 1993.

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APPENDIX C

EXTRACT FROM FEDERAL ACQUISITION REGULATION
CASE 92-54: ENVIRONMENTALLY PREFERABLE PRODUCTS

EXTRACT FROM FEDERAL ACQUISITION REGULATION
CASE 92-54:ENVIRONMENTALLY PREFERABLE PRODUCTS

FAR Case 92-54 was published as an "interim rule" on May 31, 1995; this means that its provisions are effective immediately. The interim rule amends the FAR to clearly reflect the Government's preference for the acquisition of environmentally-sound and energy-efficient products and services. It also reflects the requirement to establish an affirmative procurement program favoring items containing the maximum practicable content of recovered materials. It requires agencies purchasing EPA-designated items to meet minimum content standards for recycled content unless approval is granted by an official designated by the agency head. Contractors are required to report the percentage of recovered materials used in contract performance for designated items.

The changes apply to EPA-designated items, which means items which are or can be made with recovered materials and are listed by the EPA in a procurement guideline (40 CFR, chapter 1, subchapter I). Five items were designated in 1989 (paper and paper products, re-refined lubricating oil, retread tires, building insulation products, and cement and concrete containing coal fly ash) and EPA designated an additional 19 items (engine coolants, structural fiberboard, laminated paperboard, carpet, floor tile, patio blocks, cement and concrete containing ground granulated blast furnace slag, traffic cones, traffic barricades, playground surfaces, running tracks, hydraulic mulch, composted yard trimmings for use in landscaping, office recycling containers, office waste receptacles, plastic desktop accessories, toner cartridges, binders, and plastic trash bags) on May 1, 1995. The FAR case is structured to cover both currently designated items and additional items as promulgated by the EPA.

**AIR FORCE RESOURCE RECOVERY & RECYCLING
PROGRAM GUIDE (May 1995)**

TABLE OF CONTENTS

| Chapter | Title | Page |
|-----------|---|------|
| Chapter 1 | INTRODUCTION | |
| 1.1 | Strategic Goal | 1-1 |
| 1.2 | Program Start-up | 1-1 |
| 1.3 | Program Measurement | 1-4 |
| Chapter 2 | RECYCLING OPERATIONS | |
| 2.1 | Planning the Program | 2-1 |
| 2.2 | Program Responsibility | 2-1 |
| 2.3 | Resources | 2-1 |
| 2.4 | Waste Stream Profile | 2-2 |
| 2.5 | Market Survey & Identification | 2-3 |
| 2.6 | Facilities, Equipment, & Vehicles | 2-4 |
| 2.7 | Collection & Separation Strategies | 2-6 |
| 2.8 | Procedures for DRMO Material Sales | 2-7 |
| 2.9 | Direct Sale of Recyclable Materials | 2-9 |
| 2.10 | Distribution of Proceeds | 2-12 |
| 2.11 | Household Hazardous Materials | 2-12 |
| Chapter 3 | COMPOSTING PROGRAMS | |
| 3.1 | Elements of an Effective Composting Program | 3-1 |
| 3.2 | Composting Facilities & Operations | 3-3 |
| 3.3 | Material Collection | 3-9 |
| 3.4 | Quality Control | 3-9 |
| 3.5 | End Uses | 3-10 |
| 3.6 | Other Alternatives | 3-11 |
| 3.7 | Summary | 3-11 |
| Chapter 4 | ADVOCACY | |
| 4.1 | Education | 4-1 |
| 4.2 | Innovation | 4-1 |
| 4.3 | Purchasing Environmentally Preferable Products | 4-2 |

Chapter 5 INFORMATION SOURCES

| | | |
|-----|--|-----|
| 5.1 | Legal Requirements | 5-1 |
| 5.2 | References | 5-1 |
| 5.3 | Recycling & Composting Associations | 5-3 |
| 5.4 | Major Command Points of Contact | 5-4 |
| 5.5 | Abbreviations & Acronyms | 5-6 |

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AIR FORCE RESOURCE RECOVERY & RECYCLING PROGRAM GUIDE

CHAPTER 1 - INTRODUCTION

This document describes the general elements found in successful resource recovery and recycling programs (RRRP) and provides guidance for implementing a program. The target audience for this guide is the RRRP manager (also called the qualified recycling program (QRP) manager). There are a number of ways to set up a RRRP and it is expected that installations will tailor this program to fit the specific conditions and goals of the installation. This guide supersedes the Air Force Recycling How-To-Guide, published June 1994. Additional copies of the RRRP guide may be obtained from the Air Force Center for Environmental Excellence, Pollution Prevention Directorate (AFCEE/EP) DSN 240-4964.

1.1 Strategic Goal. The goal of the Air Force RRRP is solid waste reduction, pollution prevention, and conservation of natural resources. Objectives include:

- Minimize the amount of waste discarded in landfills;
- Increase the percentage of waste that is recycled;
- Stimulate market demand for environmentally preferable products by increasing both the type of products and the amount of products purchased;
- Expand the education program with a focus on public awareness and support of recycling and composting programs;
- Maximize proceeds both now and in the future; and
- Comply with Federal, State and local mandates.

1.2 Program Start-up. The most important part of the RRRP Manager's job is resource advocacy; acquiring the manpower, equipment, vehicles, and funding necessary to create a program that reduces waste disposal at the least cost. This section focuses on the overall RRRP program and provides general guidance about program resources. Later chapters concentrate on the specific program elements (e.g., recycling, composting) and provide detailed suggestions.

1.2.1 Selecting a RRRP Manager. Selecting a dedicated, enthusiastic, and creative program manager is critical to the success of any RRRP. It is strongly recommended that the RRRP manager have no other full-time responsibilities. The program manager must be able to dedicate 100 percent of his/her time to the RRRP.

The RRRP manager is responsible for consolidating information from all recycling activities, reporting on solid waste reduction and affirmative procurement activities, composting, environmental compliance of the program, and education.

The program manager should also develop a strategic five-year RRRP plan, program requirements in the Work Information Management System-Environmental Subsystem's (WIMS-ES) A-106 and Pollution Prevention Modules, and advocate for funding. The RRRP manager is responsible for the functioning of the RRRP Subcommittee (See 1.2.3 Organization Participation).

1.2.2 Program Responsibility. The installation commander has overall

responsibility for implementing a resource recovery and recycling program. The RRRP must comply with public law, Executive Orders, Department of Defense and Air Force policies and regulations, as well as applicable state or local requirements (See 5.1 Legal Requirements).

1.2.3 Organization Participation. Support from the installation's senior leadership and other organizations is essential to the RRRP's success. The most effective way to incorporate installation organizations into the RRRP is through the Environmental Protection Committee (EPC). The EPC should be used to report results, advance new ideas, describe problems, and identify solutions while ensuring that each organization knows its role for the program to succeed.

Increased installation emphasis can be obtained through the establishment of a RRRP Subcommittee which reports directly to the EPC. The RRRP Subcommittee allows installation-wide participation in this highly visible wing program. Committee members establish program objectives designed to maximize recycling of materials and minimizing solid waste disposal. The committee includes the RRRP manager and should be composed of representatives from a variety of base organizations, to include tenants. As a minimum, recommend representatives from the following organizations be members of the RRRP Subcommittee (installations may not have all these organizations):

- Aircraft Maintenance;
- Army and Air Force Exchange Service (AAFES);
- Base Comptroller;
- Civil Engineer Operations;
- Contracting;
- Defense Commissary Agency (DeCA);
- Defense Reutilization and Marketing Organization (DRMO);
- Environmental Management;
- Legal;
- Public Affairs;
- Services;
- Supply; and
- Vehicle Maintenance.

The initial tasks facing the RRRP Subcommittee are to obtain a waste stream characterization, identify available resources, identify potential markets, determine method of program accomplishment, identify facility, equipment, and vehicle requirements, and promote education. On the basis of this data, the subcommittee will develop a program start-up strategy and obtain organizational support for the identified initiatives. The installation commander has ultimate ownership of the program and is responsible for ensuring the program meets or exceeds Air Force goals.

Once the RRRP is functioning, the RRRP Subcommittee should review and consider:

- (1) suggestions to improve and expand present operations;
- (2) audits and inspection reports;
- (3) the RRRP budget and execution;
- (4) proposed programs/projects for recycling revenue use; and
- (5) educational and promotional activities.

1.2.4 Economic Analysis. Another essential tool is an economic analysis of the waste stream, handling methods, and material markets. This analysis

allows the RRRP manager to make intelligent choices in program start-up and employment of resources. The material markets section of the analysis should include not only how industry prefers the material packaged, but an examination of the total costs (manpower, equipment, transportation) necessary to meet this preference. The higher price obtained for material packaged in the preferred method may not be sufficient to justify the increased costs.

1.2.5 Funding. Knowledge and understanding of the funding process is necessary for program success. The funding process includes obtaining and managing start-up and recurring operating costs as well as distributing proceeds from recyclable material sales. These activities must be in accordance with AFI 32-7001, Environmental Budgeting, and AFI 32-7080, Pollution Prevention Program. Funding requirements must be budgeted and programmed through installation and MAJCOM Financial Plans and during the Program Objective Memorandum (POM) development process.

1.2.6 Manpower. Acquiring the manpower to operate the RRRP is increasingly becoming the single most important factor affecting decisions concerning the start-up and operation of recycling and composting programs. However, potential labor pools do exist and include such resources as military, civilian, contract, federal and state prisoners, and volunteers. The advantages and disadvantages of each pool are discussed in both Chapter 2, Recycling Operations, and Chapter 3, Composting Programs.

1.2.7 Equipment. The RRRP manager needs to determine the best balance between costs and equipment efficiency. For example, if a large, inexpensive labor pool is available, cheaper, more labor intensive equipment can be used. Conversely, in a tight manpower situation, the purchase of more expensive, but labor saving equipment may be a better option.

1.2.8 Vehicles. Transportation is essential for the success of the RRRP. Vehicles may be obtained through appropriated fund resources, General Services Administration (GSA) lease, or closure base residue. Requirements must be submitted to MAJCOM for authorization and acquisition.

1.3 Program Measurement. Measuring program effectiveness is an important part of the overall process. The following three metrics, in combination, provide the best complete picture of program operations.

1.3.1 Solid Waste Disposal. This method measures solid wastes disposed of in landfills and through incineration (not waste-to-energy) in tons. The annual numbers are compared to previous years and the baseline year (currently calendar year 1992 for the Air Force) to measure performance. The desired trend is reduction in annual tonnage disposed. Increases in disposal quantities should be examined to determine whether they were due to ineffective programs, inaccurate baseline data, or other factors, such as mission changes.

1.3.2 Solid Waste Generation. This metric measures the total waste generated on the installation in tons. The total waste is the sum of the disposed amount and the recycled/reused amount (sum of recycled, composted, and waste-to-energy amounts). The desired trend is reduction in annual tonnage generated. This metric allows an installation to determine the effect of their source reduction efforts, the first level in the pollution prevention hierarchy.

1.3.3 Recycling Percentage. This performance indicator measures recycled/reused amounts as a percentage of total waste generation.

The recycled/reused amount is divided by the total waste generated. The desired trend is an increase in the annual recycling percentage. This indicator judges the effectiveness of the recycling efforts, the second level of the pollution prevention hierarchy.

While source reduction is the primary focus for pollution prevention efforts, few source reduction initiatives are available to installations. This is because most source reduction opportunities are present before the installation is affected. For example, product packaging is determined by the manufacturer. The installation must determine how to handle the waste from the product, not how to eliminate the waste. Therefore, recycling percentage is an important measure of the RRRP's effectiveness.

CHAPTER 2 - RECYCLING OPERATIONS

2.1 Planning the Program. A comprehensive recycling program impacts all base organizations as they all generate solid waste. Therefore, it is imperative the recycling program receive support and commitment from all organizations on the installation.

Many areas have local or regional recycling programs. Joining existing or planned regional recycling programs is encouraged. When regional recycling programs are unavailable or unreasonably costly, the installation will need to develop its own recycling program.

Listed below are some of the planning tasks associated with implementing or improving a recycling program. The maturity of your recycling program will determine which task you begin with.

- Determine responsible/managing organization;
- Identify resources;
- Perform a waste stream profile;
- Identify potential markets;
- Determine method of operation (in-house or contract);
- Identify facilities, equipment, and vehicles;
- Determine collection and separation strategies;
- Educate base population; and
- Identify opportunities for expansion.

2.2 Program Responsibility. The installation commander has overall responsibility for implementing a recycling program. The program must comply with public law, Executive Orders, DoD and Air Force policies and regulations, as well as applicable state or local requirements (See 5.1 Legal Requirements).

2.3 Resources.

2.3.1 Program Funding. Funds to support the start-up and operation of a recycling program will be obtained in accordance with AFI 32-7001, Environmental Budgeting, and AFI 32-7080, Pollution Prevention Program. Several of the available funding sources are:

- Pollution Prevention (PP) Funding can be used to cover start-up costs (e.g., purchase equipment, bins), recurring service costs and recycling contracts.
- Operations & Maintenance (O&M) Funding for refuse collection can be used when recycling requirements are integrated into the base solid waste management contract.

- Military Family Housing (MFH) Funds must be used for recycling program requirements that encompass MFH. Examples are the purchase of recycling containers for MFH units and contract costs for curbside pick-up.

2.3.2 Manpower. Another major resource needed to successfully operate a recycling program is manpower. The Air Force Manpower Standard (AFMS) only identifies one man-year for solid waste management and recycling in the core manpower requirements. This shortage has challenged program managers to become innovative in sourcing manpower.

There are a number of ways to obtain manning for recycling operations. Potential personnel sources are military, civilian, contract, federal and state prisoners, and volunteers. The manager must weigh various factors when deciding which labor source to employ. Military and permanent civilian personnel are applied against the Unit Manning Document (UMD), but military manpower does not have to be reimbursed by program revenues. Contract labor does not count toward the UMD, but is generally more expensive. Prison labor is inexpensive, but not always available and may require escorts. Volunteers, while usually enthusiastic, are not always consistent.

2.4 Waste Stream Profile. To establish an effective recycling program, an installation must first determine the types and volumes of recyclable materials generated on the installation. As a start, review your baseline study and the profile percentages provided in the Performance Work Statement software handbook from AFCEA (For more information, contact Mr. Gary Jacks, AFCEA/CESM, DSN 523-6190). Concentrate on the materials requiring recycling in accordance with AFI 32-7080. These items are paper, plastics, metals, glass, used oil, lead acid batteries, and tires. Some of these categories can be subcategorized further, for example:

- Paper (computer, office, newspaper, colored)
- Metals
 - Ferrous (steel and iron)
 - Nonferrous (brass, aluminum, copper)
 - Used beverage containers

This list is neither all inclusive nor meant to limit materials considered for recycling. A creative and enthusiastic program manager may identify additional materials available for recycling based upon local conditions or markets. Examples of other materials being recycled are wood, food waste, Christmas trees, toner cartridges, etc.

Where a baseline survey has been completed, information from this survey can be used to estimate the volume of material potentially available for recycling.

If a detailed baseline survey is not available, other avenues will have to be used to estimate material types and volumes. These avenues may include visiting various facilities and visually inspecting trash receptacles, interviewing personnel, or using some standard estimates available from a variety of sources including the EPA. Universities and colleges can be an excellent source of baseline information, or may assist in performing a baseline survey.

2.5 Market Survey & Identification. The servicing DRMO is responsible for performing market research for all appropriated resourced material defined as recyclable. Program managers should contact DRMO to obtain current market value and market stability information. If no local markets can be determined, the DRMO's are required to seek assistance from the respective Defense Property Disposal Region in identifying other potential markets.

If an installation believes it can obtain better market prices than those provided by current DRMO contracts, they may wish to proceed with their own market identification. If the installation's survey indicates better prices can be obtained, provide this information to DRMO and request they upgrade contracts or, if all else fails, to terminate contracts for "convenience to the government." Another option is to obtain a waiver to direct sale appropriated material (See 2.9 Direct Sale of Recyclable Materials).

When market analyses are unavailable from DRMO, an installation must use its own resources to identify available markets for recyclable materials. Information on potential markets can be obtained from:

- The EPA;
- State Environmental Agency;
- Recycling organizations;
- Yellow pages under recycling or waste paper;
- Local newspapers;
- Municipal solid waste managers;
- Other base recycling managers;
- Local paper, aluminum, or cardboard manufacturers;
- Periodicals; and
- Other recyclers/generators in the area.

Potential buyers of recycled material should be queried regarding quantity requirements, acceptable levels of contamination, average price, delivery requirements, pickup availability, and equipment availability (e.g., will they provide a storage bin or trailer for hauling the material). This information is necessary to establish equipment, facility, vehicle, and material processing requirements. Examples of how these factors can effect the recycling program are:

- If a contractor wants glass delivered in original state, a crusher or condenser may not be needed.
- When a larger quantity of material is needed before sale (i.e., glass), you may opt for a crusher to minimize storage requirements.
- Will the contractor pick-up the materials or will you need to transport as part of the sale? Do you or the contractor pay the freight costs?
- Your equipment and storage requirements will in-turn drive your facility square footage requirements.

2.6 Facilities, Equipment, & Vehicles. The recycling program selected by the installation is impacted by available facilities, equipment, and vehicles. For example, if the Facility Utilization Board determines square footage is unavailable to support recycling requirements, the program manager should program for a new facility or consider contract options. Equipment needs and storage space are the primary drivers for facility size.

2.6.1 Facilities. Facilities for a recycling center need not be complex. Typically the area consists of a material recovery facility (MRF), otherwise known as a recycling center, with a small office area. The MRF should be large enough to house the material processing equipment (magnetic separator, metal can "condenser", paper balers, etc.) and allow for material handling equipment maneuverability. The MRF may also provide some storage capability for materials that are subject to weather damage. MRFs of 4,000 to 6,000 square feet are typically required for programs in the first stage. As the recycling program grows, more space and more efficient material processing equipment may be acquired.

Adjacent to the MRF should be a paved marshaling yard surrounded by a privacy fence. The marshaling yard provides an area for loading equipment and trucks to operate and should include a ramp where forklifts can load commercial transport trailers. Thirty cubic yard transport trailers are also being used by some installations to provide additional storage space and to minimize the movement of processed materials once they have been prepared for shipment. Buyers may be willing to preposition road ready licensed trailers at the recycling facility for high volume items. In addition to the MRF, additional covered storage space may be required to prevent weather damage to materials waiting for shipment.

2.6.2 Equipment. The types, models, capabilities, and purposes of available recycling equipment are numerous. Equipment is available to accomplish or assist in collecting, compacting, baling, shredding, sorting and other tasks associated with processing material for recycling. Ease of use, simplicity, cost, and effectiveness of the equipment are important traits. When searching the market for equipment items that best fit your requirements, contact the manufacturer to obtain, names of companies, municipalities or other agencies now using the equipment item. Contact these entities and get their candid evaluation of the equipment, to include operating costs. Also, contact other base program managers and ask for their input. Established GSA contracts should be your initial source for equipment, but don't limit yourself to these contracts.

After equipment requirements are established, authorizations must be obtained and added to the shop TA (Table of Allowance). Changes to TAs are coordinated through the base logistics transportation office and approved by the MAJCOM. After TAs for equipment are approved, leasing is an option to acquire short term use of equipment.

2.6.2.1 Collection Containers. Containers are chosen based on the material to be collected, expected volume, collection strategy, and cost.

- MFH curbside collection containers can be a simple plastic bin (normally provided by the contractor for contract operated programs).
- Desk-top paper collection containers are typically small cardboard bins, located on the desk, or the plastic desk-side containers. A container should be located at all desks, copiers, fax machines, and printers.
- Drop-off collection containers are generally some type of dumpster (e.g., Dempsey dumpster) or compartmentalized trailer. There are a variety of styles and sizes. Some types are self-dumping containers which may help minimize processing time.

2.6.2.2 Balers. Balers are normally required to package cardboard and paper into more manageable bundles. Compacted items are less bulky and often command higher prices. Consider versatility of the make and model of the unit purchased. Balers can be either horizontal (self-load) or vertical stroke. The horizontal baler will cost more (total cost approximately \$60-90,000), but is less labor intensive. An option for this model is a "fluffer" that is used to improve the compaction of paper. The vertical downstroke unit will cost less (total cost approximately \$20,000) but is labor intensive. This unit can be considered for bailing of plastics and as a back-up in the event the horizontal baler is down for maintenance.

2.6.2.3 Crushers/Condensers. Crushers and condensers are typically used for aluminum and steel cans. Condensers, often referred to as a "cuber", compresses cans into a high density, low volume cube. Crushers simply crush

individual cans. The model selected should be based upon the market preference and transportation costs. Crushers are also used for glass.

2.6.2.4 Shredders/Sorters. Shredders reduce the bulk of many materials (e.g., cans, paper, and plastic). A paper shredder may be warranted if your installation processes large quantities of "Privacy Act" or "For Official Use Only" paper (check with your installation Information Management section to determine the appropriate level of protection and methods of destruction in accordance with AFIs 37-131 and 37-132). Before purchasing a paper shredder, check with Information Management for possible resources already on base. Sorters are used to separate metals. A simple magnetic sorter separates metal, such as steel and aluminum cans. When obtaining these pieces of equipment, self-loading or conveyer type units should be considered since they are less labor intensive.

2.6.2.5 Conveyors. Conveyors come in an assortment of sizes and can be used in conjunction with other equipment items, such as a horizontal baler, or they can be used individually for material sorting. These items can range in price from a couple of thousand dollars for a simple conveyor to upwards of \$65,000 for a material sorting conveyor.

2.6.2.6 Material Handling Equipment. Equipment to load and handle the recyclables is required. Types of equipment may include: front-end loaders (e.g. Bobcat loader with forklift, grapple hook, and bucket attachment), fork lifts, pallet jacks, and trailers, etc.

2.6.2.7 Other Equipment. Based on waste stream analysis and market demand, other equipment items may be considered; for example, drum crushers, oil filter crushers, aerosol can puncturers, perforators, etc.

2.6.3 Vehicles. Vehicle needs will be determined by the level of the recycling operation. Small operations can usually be supported using existing base vehicles while most intermediate level operations require substantial vehicle support. When base assets are not available to support recycling activities, the recycling program may require dedicated vehicles and equipment. Vehicle needs, depending on the level of operation, can include a front-end loader, flatbed truck, etc.

After vehicle requirements are established, authorizations must be obtained and added to the shop TA. Changes to TAs are coordinated through the base logistics transportation office and approved by the MAJCOM. After TAs for vehicles are approved, leasing is an option to acquire short term use of vehicles.

2.7 Collection & Separation Strategies.

2.7.1 Collection Strategies. The choice of collection strategies has considerable impact on both level of participation and program costs. The easier it is for the customer to participate in the program, the greater the level of participation.

2.7.1.1 Drop-off. The drop-off collection method typically consists of placing multiple collection bins in a centralized location, often the recycling center, where participants bring their recyclables. Participation can be increased by placing additional bins in strategic locations throughout the base (e.g., a newspaper collection bin near the commissary). Participants should be required to sort their material and place it in appropriate bins. A less desirable and more labor intensive option is

allow participants to bring their material to the recycling center for sorting.

- Advantages: This collection method is usually the least expensive collection option. Equipment and manpower costs are minimized. Persons that voluntarily drop off recyclables tend to properly sort items. Drop off collection can be used alone or in conjunction with other collection methods. This is an excellent startup method.

- Disadvantages: Participation levels are usually lower since participants bear the burden of collecting and delivering recyclables to the collection center. Recyclables may be commingled or mixed with trash if bins are unattended. If participation is mandatory, recyclables are unlikely to be properly sorted. The area may also become untidy if bin overflow is allowed.

2.7.1.2 Facility Pick-up. In-house or contract personnel, on a scheduled basis, will collect recyclable materials from base facilities. Typically, this pick-up encompasses the centrally located containers where individual facility occupants have transferred the materials. Materials often include paper, cardboard, toner cartridges, aluminum cans, and computer paper.

- Advantages: There will be greater participation and greater quantity and types of materials collected. This method is also more customer friendly.

- Disadvantages: Increased manpower and container requirements result in increased cost.

2.7.1.3 MFH Curbside Pick-up. Similar to trash collection, recyclables are picked up at MFH units. Participants set recyclables out on collection days. Recyclables can be collected together and sorted at the recycling center, or participants may be required to separate their materials prior to curbside pick-up. Bins should be provided to the participants to facilitate uniformity and ensure ease of pickup. Curbside pick-up can be used in conjunction with drop off collection to achieve maximum collection rates. Recyclables should be picked-up the same day as the refuse. This action provides greater customer convenience and participation. Also, same day pick-up of refuse and recyclables may ease the surveillance requirements from the additional Quality Assurance Evaluation (QAE) tasking.

- Advantages: This collection method typically has the highest rate of participation since it requires only minimum effort on the participant's part. MFH resident's only set recyclables out as they would their trash.

- Disadvantages: Collection costs are increased.

2.7.1.4 Contractor. Using a contractor for collection of recyclables is similar to using a contractor for refuse collection. It may be possible to modify your existing refuse collection contract to include recycling requirements. You may also want to include in the contract the operation of the MRF if there is a shortage of in-house manpower. The contract can provide incentives, such as the contractor keeping the material sales proceeds, for the contractor to minimize costs and maximize collection.

- Advantages: Use of contract recycling can minimize start-up, manpower, and facility costs (less capital investment). The program can be tailored to meet the specific needs of the base. The base may continue to receive recycling proceeds.

- Disadvantages: There will be an additional contract management

responsibility. This method is typically more expensive which results in less recycling proceeds to the installations.

2.7.1.5 Combination. It is common practice to use a combination of the above collection strategies to maximize participation and material collection with the most efficient operation.

2.7.2 Separation Methods. Material separation can occur at the generating source, at the drop-off containers, or at the material recovery facility. Choosing where to separate the materials will have an effect on the program strategy and costs. Separation is done manually or mechanically by ferrous/non-ferrous separators.

2.8 Procedures for DRMO Material Sales. Once the recyclable materials are sorted and prepared for market, it is time to process the necessary paperwork for a sale. DRMO is responsible for selling all appropriated resourced recyclable materials. It is their responsibility to process the material for sale and obtain current market prices.

2.8.1 Turn-in and Accountability Procedures. To ensure funds from sales managed by DRMO are received, the installation must provide DRMO with properly completed DD Form 1348-1, turn-in documents. If the DD Form 1348-1 is inaccurately completed or lacks information, proceeds generated by the sale will generally be deposited to the general account of the US Treasury. Reversals/recovery of funds deposited to the general account are unlikely. The critical information needed on the DD Form 1348-1 with respect to the installation recycling fund cite consists of four parts:

- A two digit service identification code (SIC) -- 57 for AF;
- Recycling Budget Clearing Account Code (BCAN) -- obtained from Accounting and Finance;
- Appropriation Limitation identifier -- 8900 for AF; and
- Fiscal station number -- installation specific identifier, obtained from Accounting and Finance.

Also, the recycling manager, or his designated representative, must include on the DD Form 1348-1 the following statement of certification accompanied with his/her signature:

"I certify that this material meets all applicable qualifications of the DoD RRRP and that no munitions list/strategic items requiring demil are present. The following is a valid RRRP fund cite: (installation RRRP account fund cite)"

To ensure the installation receives the correct amount of funds from the sale of recyclables, the recycling program manager must track the delivery and sale of recyclables. NOTE: Sale information is available from DRMS Form 1427 and DRMO's computerized tracking system. As a minimum, document the following for each transaction:

- Date of turn-in;
- Item description (including weight);
- DD Form 1348-1;
- Date and price of sale;
- Date and amount of distribution received by installation; and
- Total proceeds.

2.9 Direct Sale of Recyclable Materials. If requested by the appropriate organization, the recycling manager can direct sell all recyclable materials

not acquired with appropriated funds. These materials include items collected from organizations such as the Commissary, Base Exchange, or the base Services Squadron. The recycling manager has unilateral authority to direct sell those recyclables collected from MFH. When direct selling any of these items, the recycling manager must keep accurate accountability of all materials, to include types, weights, proceeds received, and where the materials were generated (e.g., AAFES, DeCA). If appropriated funded resources collected, processed, or handled these materials, these proceeds must be used to cover appropriated fund costs (See 2.10 Distribution of Proceeds).

Direct sale of recyclable material should be handled similar to other installation sales, such as firewood and Christmas trees. Sales should be coordinated with, and supported by, the installation contracting office.

Other situations may arise where the recycling manager may direct sell appropriated resourced recyclable materials. However, to do so, a waiver must be obtained from Defense Reutilization and Marketing Service (DRMS).

2.9.1 Direct Sale Waiver. If an installation believes current DRMO contract prices are not competitive with current market prices or the proceed return time does not support program expenses, the installation may opt to request a waiver to direct sell appropriated resourced materials. This waiver could result in quicker return of proceeds and allow the RRRP manager to meet program expenses.

NOTE: If an installation chooses to execute its recycling program by using a contractor, and as part of the contract the contractor returns the proceeds from the sale of the recyclables to the installation (i.e., "funds change hands"), it is considered a direct sale of appropriated resource materials and a waiver from DRMS is needed. A waiver is not needed if the contractor keeps the proceeds to offset the total contract cost as negotiated at contract award.

The established DRMS procedures (sent to MAJCOM/CEVs 16 Mar 95) for submitting a waiver request to direct sell appropriated resourced materials is as follows (clarifying remarks/suggestions are italicized):

(1) Submit the request to your MAJCOM who will in-turn endorse it with a recommendation for approval/disapproval. The MAJCOM will return the endorsed request to the installation for their submittal to the servicing DRMO. The request must contain the following information:

I. The past year's quantities generated, by requested commodity, at DRMO obtained prices. (Include the distance to the DRMO, the time between delivery and actual payment [time is money], and any other relevant costs.)

II. The past year's quantities generated, by requested commodity, at complete market value (net of overhead and transportation).

III. Written acknowledgment of the requirements and provisions of the Deputy Under Secretary of Defense (Environmental Security) Memorandum of 28 Sep 93, subject: Policy for DoD Recycling. The installation must note in particular the following:

A. The requirement that sales of recyclable materials be in accordance with Section 203 of the Federal Property and Administration Act of 1949;

B. The requirement for installations selling directly to maintain operational records for fiscal year reporting requirements, review and program evaluation purposes. This is to include, but is not limited to, quantities generated and sold, prices obtained, copies of successful contracts, potential buyer mailing list; and

C. The definition of eligible recyclable materials and applicable exclusions. (From DUSD(ES) Memo, 28 Sep 93: Recyclable materials. Includes materials diverted from the solid waste stream and the beneficial use of such materials. Recycling is further defined as the result of a series of activities by which materials that would become or otherwise remain waste, are diverted from the solid waste stream by collection, separation and processing and are used as raw materials in the manufacture of goods sold or distributed in commerce or the reuse of such materials a substitutes for goods made of virgin materials. The term also includes, for purposes of this policy document, scrap, (including ferrous and nonferrous scrap) and, specifically, firing range expended brass and mixed metals gleaned from firing range cleanup which do not require demilitarization.)

IV. Written acknowledgment that any approval granted is subject to change or termination if the Office of the Secretary of Defense's direct sale policy is changed or terminated.

V. Failure to comply with the above requirements is justification to withhold the granting of requested direct sales waivers or the cancellation of existing waivers.

(2) DRMOs will confirm the validity of commodities, quantities generated, prices, or any relevant changes as reflected on DRMO records and forward request to the DRMS (Attn: DRMS-MD). DRMOs will also include a recommendation as to the granting of the requested direct sales waiver.

(3) DRMS will review the request and approve or disapprove as appropriate. DRRMS will then notify the requesting installation, the MAJCOM, and the effected DRMO, with an information copy to HQ DLA (Attn: MMSC). When there subsequently is a dispute between the DRMS recommendation and the MAJCOM's position, the request will be forwarded to HQ DLA for assistance.

(4) Approvals will be granted for a maximum period of six months. As part of the consideration of any waiver renewal, the installation will submit to the DRMS (Attn: DRMS-MD) the following data:

- I. Commodities generated and successfully sold;
- II. Time period involved;
- III. Relevant proceeds obtained; and
- IV. Types of sales contracts utilized.

(5) Direct sales waiver renewals will be granted only when it can be clearly demonstrated that the applicable DRMO and DRMS sales activities can not duplicate or exceed the same efficiency and cost effectiveness as that of the generating activity.

As noted above, accurate and complete accountability is a must.

2.10 Distribution of Proceeds. Recycling proceeds returned to the installation from the DRMS and from direct sales of appropriated funded material must first be used to recover appropriated fund costs incurred managing and operating the qualified recycling program to include but not

limited to: manpower, equipment, utility, and real property costs. After appropriated costs are reimbursed and there remains revenues from that fiscal year's sales, then the installation commander may use up to 50 percent of the remaining sale proceeds for pollution abatement, energy conservation, and occupational safety and health activities. These activities may be funded up to 50 percent of the cost of a minor construction project. Any remaining proceeds may be transferred to the Morale, Welfare, and Recreation Fund to be used for morale, welfare, and recreation activities.

2.11 Household Hazardous Materials. Hazardous materials such as pesticides, cleaners, and similar products are common in most households. Unfortunately, many of these materials end up in the household trash when they are no longer needed. Even though household hazardous waste is specifically exempt from federal regulations, the local landfill is not the best disposal method. Household hazardous waste is of particular concern on a military installation due to the constant movement of personnel and their families. As a result, large quantities of unused, potentially hazardous materials are tossed in with the household trash. A much better alternative is a "drop and swap" program for unused materials. A central location is established where departing personnel can drop off their unwanted materials, and incoming personnel can pick-up items they need. In essence, unwanted hazardous materials are recycled back to the consumer for use. It is up to the installation to determine where the "drop and swap" is located and the hours of operation. Accept only those materials in their original containers and having legible labels. The base should be prepared to deal with materials that cannot be redistributed and must be disposed of as waste. It is important that all state and local regulations be considered before initiating a program of this sort.

CHAPTER 3 - COMPOSTING PROGRAMS

Yard waste, by weight, may constitute up to 20 percent of the solid waste stream at an Air Force installation. Many states already ban landfilling of yard and other organic wastes. Composting is a well-known technology for processing organic materials that can help installations meet solid waste reduction goals, produce a beneficial end-product, and minimize environmental pollution from organic solid waste.

3.1 Elements of an Effective Composting Program. Many factors must be considered in deciding whether an on-site composting program is feasible at an installation. Some of these factors are waste stream composition, regulatory requirements, siting issues, funding availability, manpower and equipment requirements, and the availability of existing municipal composting programs in the area.

3.1.1 Waste Stream Investigation. Identifying and quantifying the components of the solid waste stream are an integral part of preliminary planning for a composting operation. Excellent sources for this information are the initial installation Solid Waste Baseline Survey and annual solid waste stream evaluations. Other sources include federal, state, and local environmental agencies.

3.1.2 Regulatory Requirements. Regulations governing the location and operation of composting facilities vary from state to state; some areas have strict guidelines, while others have minimal requirements. Generally, stricter regulations apply for the composting of sewage sludge, food waste, and municipal solid waste. State and local regulatory requirements can include permitting requirements, groundwater monitoring requirements, runoff control,

operator certification, and other operating and record keeping requirements. Before establishing an on-site composting program, coordinate with your local and state environmental regulators.

3.1.3 Siting Issues. The location and size of a composting facility must comply with any existing regulatory requirements and the installation's Base Comprehensive Plan. Federal Aviation Administration (FAA) guidelines recommend against siting any type of solid waste facility, other than yard waste composting facilities, within 10,000 feet of a runway. This requirement is to prevent birds, which could be attracted to the site by potential food sources, from interfering with aircraft. Potentially suitable locations for these facilities are areas adjacent to buffer areas of existing or closed landfills or wastewater treatment plants. Other factors to consider in facility siting include convenient location to minimize hauling distances, suitable site topography and soil characteristics, sufficient land areas for the volume and type of materials to be processed, and adequate distance from public areas to minimize odor concerns.

3.1.4 Funding. Composting operations can vary from very low-end, low-cost programs to high-technology industrial operations. Sound financial planning is a crucial step in successfully developing a composting program. To determine funding requirements, complete an economic-benefit analysis. This analysis should consider organic waste volumes, availability of existing equipment, manpower requirements, most suitable technology, facility and equipment requirements, contract costs, and recurring costs. Funding to support start-up and recurring operation costs for composting programs shall be in accordance with AFI 32-7001, Environmental Budgeting. Funding requests must be budgeted through installation and MAJCOM Financial Plans and programmed in the POM development process.

A number of potential funding sources may be used. Choice of funding sources will vary depending on the policies of the installation's MAJCOM. Several of the available sources are:

- Pollution Prevention Funds can be used to cover composting program start-up and recurring operating costs. Funding needs are identified through the WIMS-ES A-106 and Pollution Prevention Modules. Pollution prevention funding requests should be coordinated through the base environmental engineering flight or office;

- Military Family Housing Funds can be used for costs associated with curbside collection in military family housing areas. MFH funding requests must also be included in Financial Plans and in the POM. Funding requests are coordinated through the civil engineering resources flight;

- Installation O&M Funds may be used for start-up and operation of composting programs, at the discretion of the Installation Commander; and

- Federal, state, local or private grants may be available to assist in set-up or operation of installation composting programs. For information on grant availability, contact the regional EPA or the state environmental department.

3.1.5 Manpower. Another major resource needed to successfully operate a composting program is manpower. The Air Force Manpower Standard (AFMS) only identifies one man-year for solid waste management and recycling in the core manpower requirements. This shortage has challenged program managers to become innovative in sourcing manpower.

There are a number of ways to obtain manning for composting operations. Potential personnel sources are military, civilian, contract, federal and state prisoners, and volunteers. The manager must weigh various factors when deciding which labor source to employ. Military and permanent civilian personnel are applied against the Unit Manning Document (UMD), but military manpower does not have to be reimbursed by program revenues. Contract labor does not count toward the UMD, but is generally more expensive. Prison labor is inexpensive, but not always available and may require escorts. Volunteers, while usually enthusiastic, are not always consistent.

3.1.6 Facility Requirements. Most small to medium scale composting operations do not require building facilities; however, minimum facility requirements include a fenced site and a composting pad surface. To operate efficiently, a composting facility must have sufficient space for the preprocessing, processing, and post-processing stages of the composting cycle. The composting pad surface does not have to be paved, but it must be designed to prevent ponding and to control erosion and runoff. Soil permeability should also be considered. Regulatory and permitting requirements, if applicable, will provide the basis for facility design and must be thoroughly researched. In addition to facility requirements, the type and amount of traffic into and out of the facility should be considered in the design process.

Site access must be controlled at all times to avoid compromise of the composting process and ensure a safe operation.

3.1.7 Vehicles & Equipment. Vehicle and equipment needs will be determined by the level of composting operation to be implemented. Small, low-technology operations such as static pile composting can usually be operated using existing base vehicles and equipment while most intermediate-technology operations, including windrow operations, require substantial, dedicated, vehicle and equipment support. Vehicle and equipment needs, depending on the level of technology used, can include a front-end loader, windrow turner attachments, grinders or shredders, screening equipment, portable storage bins, aeration equipment, odor control equipment, in-vessel equipment, etc.

After vehicle and equipment requirements are established, authorizations must be obtained and added to the shop TA (Table of Allowance). Changes to TAs should be coordinated through the base logistics transportation office and approved by the MAJCOM. After TAs for vehicles and equipment are approved, leasing is an option to acquire short term use of vehicles and equipment.

3.1.8 Existing Municipal & Community Programs. Many cities and communities operate successful composting operations. When these programs are available, installations should consider participating in these existing composting programs in lieu of implementing in-house composting.

3.1.9 Air Force Installation Programs. Composting managers can network with installations that already have or plan to start yard waste composting operations. To obtain a copy of Air Force current and planned yard waste composting programs, contact Mr. Wayne Fordham, AFCEA/CESM, DSN 523-6465.

3.2 Composting Facilities & Operations. The composting process occurs in two major stages. In the first phase, microorganisms decompose the organic material through metabolic activity and the size of the composting pile is reduced. During the second stage, the compost is "cured" or finished and further microbial decomposition will occur very slowly. Because microorganisms are essential to composting, environmental conditions that maximize microbial

activity will maximize the rate of composting. Microbial activity is influenced by oxygen levels, particle sizes of the feedstock material, nutrient levels (indicated by the carbon-to-nitrogen ratio), moisture content, temperature, and pH.

3.2.1 Composting Methods. The most commonly used processing methods are static piles, turned windrows, aerated static piles, and in-vessel composting systems. The level of technology selected will depend on the type of feedstock materials, requirements for odor and leachate control, quality requirements for the finished material, funding availability, and space availability. Brief discussions of each of these methods follow:

3.2.1.1 Static Pile Composting. Static Pile Composting is low technology composting. Static or passive piles are piles of composting material that are turned infrequently, as little as once per year. This method requires only minimal labor and cost and is especially suited for backyard composting in military family housing areas and for small volumes of ground maintenance wastes. Before promoting backyard composting programs on an installation, the support of the base Environmental Protection Committee (EPC) and Installation Commander are required. Composting under these conditions is very slow and odor problems can result if food waste materials are incorporated or when large quantities of green materials are added to the piles.

With all composting methods, regular monitoring of temperature and moisture conditions is recommended. For static piles, the moisture content of internal and external layers should be occasionally checked. When moisture conditions are too low, the piles can be watered with hoses or sprinklers. Temperature and oxygen levels can be controlled by forming piles of the appropriate size for the region. Larger piles have greater insulation and can sustain higher temperatures. However, passive piles should not be constructed so large as to overheat. At temperatures greater than 140 F, microorganisms may die off and anaerobic conditions can develop.

The disadvantages to static pile composting are long composting times (often longer than one year to produce finished compost) and the possibility of anaerobic conditions and accompanying odor problems. Despite these disadvantages, static pile composting can be a simple and effective method for some programs.

3.2.1.2 Turned Windrow Composting. This process is a more efficient method to static pile composting. Turned windrow is the most widely used intermediate-technology composting method. Windrows are long composting piles that are mechanically turned at regular intervals to enhance environmental conditions for microbial decomposition. As windrows are turned, cooler outer layers are moved to the center of the pile where there are higher temperatures and intensive microbial activity. The turned windrow method produces compost material in two to six months.

Optimum size for windrows are 8 to 12 feet at the base and 5 to 8 feet high. Windrow cross-sections should be rounded, concave or trapezoidal to allow proper insulation. Progressive decomposition of the composting material reduces the size of the windrows and two decomposing windrows can be combined to create space for new windrows or for stockpiling.

Turning frequency is generally once or twice per week. The turning equipment used will determine the size, shape, and space between the windrows. Front-end loaders are commonly used, however specialized windrow turning equipment is recommended to compost large volumes of material. Windrow turning attachments

are available that hook up to most front-end loaders. Monitoring for moisture content, oxygen content, and temperature should be done frequently, generally daily, and operating logs should be maintained. This operating data is evaluated to optimize windrow turning frequency, windrow composition, and watering frequency.

3.2.1.3 Aerated Static Piles. These are a higher technology application than turned windrows. In this method, piles or windrows are placed on top of a grid of perforated pipes and air is forced through the piles or windrows using fans or blowers. This action maintains aeration in the composting process and minimizes, or eliminates the need for turning. Air can be supplied through a suction system or a positive pressure system. In a suction system, air is drawn into and through the pile and then vented through a pile of finished compost or a filter to control odor. With a positive pressure aeration system a blower pushes air into the compost pile and the air is vented over its entire surface. Because of the way air is vented, odor treatment does not occur in a positive pressure system.

To ensure proper decomposition, temperature and oxygen levels must be closely monitored. Aeration is controlled by running blowers continuously or intermittently. In general, aerated static piles are best suited for granular and relatively dry feedstock materials with a relatively uniform particle size.

3.2.1.4 In-Vessel Composting. These systems are high technology methods in which composting is conducted within a fully enclosed system. All critical environmental conditions are generally controlled through fully automated built-in systems. In-vessel composting systems are generally expensive; however, they may be justified where space is limited and careful odor and leachate control is required.

There are two general types of in-vessel composting technologies: rotating drum systems and tank systems. Rotating drum systems use a tumbling action to continuously mix the materials. The rotating drums are long cylinders, typically nine feet in diameter, that rotate slowly. Oxygen is forced in from exterior air pumping systems, while the tumbling action allows temperature to be maintained at high, uniform levels. In general, complete stabilization of the composting material is complete within one to three months. Tank in-vessel systems use long, rectangular vessels and external pumps which force air through a perforated bottom. Materials are mixed within the tank by a moving belt, paddle wheel or other device to break down clumps. The composting process can be completed within 30 days, but often the materials must be cured in windrows for an additional 30 to 60 days.

3.2.2 Curing Stage. After materials have been composted using one of the methods described above, curing should be allowed until the materials are stabilized. During the curing stage, compost is stabilized as the remaining nutrients are metabolized by any microorganisms that are still present. Since curing piles undergo slow decomposition, care should be taken to ensure anaerobic conditions do not develop. The curing process generally takes approximately one month and requires much less space than the actual composting process. Materials can be placed in small piles during the curing stage.

Once the curing process is complete, the finished compost should have an earthy odor. In addition to relying on odor to determine when the compost is sufficiently stabilized, temperature checks and oxygen and carbon dioxide testing can also provide evidence of compost maturity.

3.2.3 Odor Control. Odor production can lead to installations, or communities, wanting to close the composting site. Odors are often properly

controlled by adjusting the composting process to provide ideal environments for aerobic bacteria. Serious odor problems may require covering the active composting area, incorporating biofilters, or adjusting facility operations to decrease odor production.

3.2.4 Composting Operations Plans. A clear, detailed composting operations plan should be developed prior to beginning a composting operation. These plans should be annually revised or verified. A composting operations plan may also be required by state and local environmental regulations. The operations plan should include operating procedures, safety and emergency procedures, operational checklists, and process troubleshooting. Along with the composting operations plan, facility monitoring logs should be developed to record operational parameters (turning frequency, temperature readings, watering frequency, windrow/pile composition, etc.).

3.2.5 Watering. Maintaining a moisture content of 40 to 60 percent can significantly enhance the composting process. Before composting begins, the moisture content of the feedstock materials should be determined. The "squeeze test" is a simple way to estimate moisture content. If just a few drops of water are released when a handful of feedstock material is squeezed, the moisture content is generally acceptable. For more definitive moisture content determinations, a sample of material can be weighed wet and weighed after oven drying. Moisture content is then established using the following formula:

$$\text{moisture content} = (\text{wet weight} - \text{dry weight}) / \text{wet weight}$$

Depending on climate conditions, composting technology used, and operational factors, a water supply may be required on-site to meet compost watering requirements. Water requirements should be incorporated into the facility design. Storm runoff retention ponds can provide a source for meeting watering needs.

3.2.6 Operator Training. Operator and compost facility worker training is an essential element of a successful and safe composting program. The level of training required will vary with the type and level of composting technology used, and with state and local requirements. Currently, there are no specific composting training programs offered through Air Force or DoD schools. Best sources for training include university-offered courses, community-sponsored training programs, and private firms that offer on-site training services.

3.2.7 Feedstock Materials. Virtually any organic material can potentially be composted and composting programs can be designed to handle yard trimmings (leaves, grass, tree prunings), food wastes, sawdust, wood, scrap paper products, sewage biosolids, and animal manure. More recently, composting has been used to bioremediate petroleum-contaminated soils. In deciding which organic wastes to incorporate into a composting operation, several factors (e.g., cost, site size, amount of waste, environmental regulations) must be considered. Generally, more stringent environmental regulations will apply when composting sewage sludge and animal manure. In addition to environmental requirements, the type of composting method employed (low tech or high tech) will also determine which materials should be composted.

Once an initial decision is made on the materials to be used for feedstock, each facility should experiment to establish proper feedstock blend ratios. For composting to proceed efficiently, microorganisms require specific nutrients in an available form, adequate concentration, and proper ratio. The essential macronutrients needed by microorganisms in relatively large amounts include carbon (C), nitrogen (N), phosphorus (P), and potassium (K).

Microorganisms require carbon for an energy source and they need carbon and nitrogen to synthesize proteins and reproduce. Potassium and phosphorus are essential to cell reproduction and metabolism. Composting organisms also need trace elements to foster proper assimilation of all nutrients. However, in a composting system, carbon and nitrogen are usually the limiting factors for efficient decomposition.

The carbon to nitrogen ratio, commonly known as the C:N ratio, is a common measure of the availability of nutrients for microbial use. For proper decomposition the nutrients in the compost pile or windrow should be in the right C:N proportions. The table below shows C:N ratios for common composting feedstock materials. High C:N ratios (high C to low N) inhibit the growth of microorganisms that degrade compost feedstock. Low C:N ratios (low C to high N) initially accelerate microbial growth and decomposition. However, with this acceleration, available oxygen is rapidly depleted and anaerobic conditions can develop if operating conditions are not carefully controlled. Excess nitrogen is released as ammonia gas and extreme amounts can form enough ammonia to kill microbes and inhibit the composting process. Excess nitrogen may also be released in the leachate.

Table 1
C:N Ratios of Common Composting Materials

| | |
|------------------------|---------|
| Leaves and Weeds (dry) | 90:1 |
| Horse Manure | 25:1 |
| Sawdust | 500:1 |
| Grass | 12-20:1 |
| Paper | 170:1 |
| Food Scrap | 15:1 |
| Wood | 700:1 |
| Sludge | 11:1 |

Optimum composting occurs when the C:N ratio of the composting material is from 25:1 to 35:1. At C:N ratios greater than 35:1, the composting process slows down while at C:N ratios lower than 25:1, anaerobic conditions often develop. Generally, the C:N ratio for yard trimmings can be approximated by examining the nature of the feedstock; green vegetation is high in nitrogen and brown vegetation is high in carbon. More precise C:N ratios are determined by laboratory analysis. Feedstock materials with different C:N ratios must be mixed in proper proportions to obtain optimal C:N levels.

Acidity and alkalinity (pH) should also be monitored. At a neutral pH of 7, the composting process is more efficient. Different materials have different pH values and care must again be exercised in mixing them. Because pH levels are largely self-regulating, actions are rarely necessary to bring pH to optimum levels; however in instances where pH levels are significantly low, buffering agents such as lime can be added.

The final aspect to consider in compost pile and windrow composition is mixing or blending of feedstock materials. For example, bulking agents such as wood chips are often added to grass piles to increase particle size. Bulking agents are dry materials with high carbon content. They should be incorporated to maintain adequate porosity and aerobic conditions in compost piles. Mixing should be conducted after feedstock sorting and size reduction and before processing begins.

3.3 Material Collection. Separating yard wastes from other waste is easiest when accomplished at the source. Materials must be brought to the composting site in an economically feasible manner and with minimum contamination. To increase military family housing participation, frequent and convenient collection is needed. Programs can be designed to collect just yard trimmings, or yard trimmings and recyclables. Collection can occur at curbside or through drop-off sites. For collection of base grounds maintenance wastes and other organic materials, it is generally best to set up delivery to the composting facility.

There are several alternatives that can be established to accomplish collection of yard wastes and other organic materials. Curbside collection for family housing areas can be integrated into existing refuse or recycling collection contracts and funded using MFH funds. Base grounds maintenance contracts can be modified to include delivery of landscaping wastes to the composting facility.

3.4 Quality Control. After the initial processing and curing of the compost material is complete, quality control procedures are needed to refine the compost product to meet end-use specifications. Certain end uses of compost require the production of a high-quality product that does not pose threats to plant growth or the food chain. Other uses, such as for berming or landfill cover, have less rigorous requirements. Compost derived from yard trimmings contains fewer nutrients than compost produced from sludge composting; however, it contains fewer hazardous constituents and other contaminants. During post-processing, compost can be screened and analyzed to ensure that stabilization is complete.

3.4.1 Testing. Compost should be tested for chemical and pathogen contamination and to determine nutrient levels. Compost stability can be assessed by seed germination tests or by analyzing factors that indicate compost maturity, such as oxygen consumption, carbon dioxide production, C:N ratios, and cation exchange capacity. Several state and local requirements specify compost quality requirements; therefore, laboratory analysis may be required to ensure these requirements are met. In particular, when composting biosolids (sewage sludge and manure), concerns about the presence of heavy metals (lead, cadmium, copper, mercury, chromium, and nickel) should be incorporated into compost testing requirements. Finally, sampling for pesticides and herbicides may also be warranted.

Testing for contaminant and nutrient levels is important if end uses require specific nutrient ranges. Nutrient and contaminant information can be used to establish suggested uses for the compost, appropriate application rates, and restrictions on compost use.

To ensure product quality, the compost product should be laboratory tested frequently. A composite sample, composed of many small samples from different locations in piles and windrows, and/or individual samples can be taken. Field tests can also be conducted to demonstrate product utility. Finally, testing data should be recorded in a computerized spreadsheet to provide a basis for comparing changes in compost quality or characteristics.

3.4.2 Compost Screening & Sorting. Sorting and screening is conducted to remove unwanted material and larger particles that lower compost quality. Screening can be performed to generate compost of uniform size for end uses where uniformity is important, such as in horticultural applications.

3.4.3 Quality Characteristics. Product quality depends upon the biological,

chemical, and physical characteristics of the compost material. Following is a list of desirable characteristics in finished compost:

- Compost maturity after proper curing and stabilization;
- High organic matter content;
- Absence of weeds, seeds, pathogens, and contaminants;
- Neutral pH;
- Balanced nutrient levels (nitrogen, phosphorus, etc.);
- Low concentrations of soluble salts;
- Uniform particle size (less than 0.5 inch);
- Dark color with an earthy bouquet;
- Moisture content below 50 percent; and
- Absence of heavy metals (lead, chromium, copper, etc.)

The final compost product should meet applicable regulatory standards and exhibit quality characteristics suitable to the expected end use(s) of the product.

3.5 End Uses. Finished compost is a valuable soil amendment that can be used in a variety of applications, from agriculture to landscaping to reforestation projects to residential gardening. Compost can benefit the biological, chemical, and physical properties of soil, including soil porosity, water retention, resistance to wind and water erosion, and crusting. Compost regulates the storage and release of nutrients, enhances the development of beneficial microorganisms, builds up plant resistance to parasites and diseases, and promotes faster root development. Plants grown using good quality compost can produce higher yields and show less weed growth.

3.5.1 Potential Uses at Air Force Installations. End uses for compost will depend on compost product quality, size, and local conditions. Proven applications include use of compost as a soil amendment, fertilizer supplement, top dressing, mulch, landscape planting material, potting mix component, peat substitute, landfill cover material, topsoil for road and construction work, soil erosion prevention, water quality applications, and bioremediation of contaminated soils. Compost can be provided to installation housing residents through housing self-help stores.

Although compost quality will largely determine potential end uses, both high- and low-quality compost can be used at installations. Generally, high quality compost should be used in locations where people or animals come in direct contact with the compost or in the upgrade of public lands. Lower quality compost can be used for purposes such as land reclamation, landfill cover, berming, and to maintain road shoulders. Compost is valuable for land reclamation areas because of its high water retention capacity. A coarse compost with low water retention may be preferred for areas where weed control is necessary.

Compost used on Air Force installations must comply with both state and federal standards for land application. Beyond these standards, quality criteria for compost is discussed in the Quality Control section of this guide.

3.6 Other Alternatives. There are other alternatives available for yard waste instead of a centralized composting program or disposal. Grasscycling and backyard composting are two methods implemented at some Air Force installations.

3.6.1 Grasscycling. Grasscycling encourages leaving grass clippings on mowed lawns. A thin layer of grass clippings and leaves can improve soil moisture

retention abilities and can act as a natural fertilizer, reducing the need for commercial fertilizers. Grasscycling ideas also include promoting the use of mulching mowers, advocating higher grass height standards, encouraging more frequent mowing, and instituting water-wise policies.

3.6.2 Backyard Composting. Backyard composting programs can be an integral part of a comprehensive solid waste management program. To encourage backyard composting programs, composting bins can be provided free of charge to militaryfamily housing residents, or provided on loan through MFH self-help stores. Brochures or information papers on backyard composting techniques can be provided to residents through the housing self-help store and during awareness fairs and events. Technical assistance courses can be provided to residents who are interested in pursuing backyard composting. Programs to promote interest in backyard composting can be initiated in base schools.

3.7 Summary. Compost is the natural recycling of organic wastes into one of nature's best mulches and soil amendments. Composting programs can offer an efficient, cost-effective method of reducing operating costs while complying with Air Force and DoD pollution prevention policies and achieving solid waste reduction goals.

CHAPTER 4 - ADVOCACY

4.1 Education. Without education, the best designed, equipped recycling and composting programs will not succeed. By making the base populace aware of the programs and educating them on their part, program effectiveness will be greatly increased. The RRRP manager must stress the benefits of source reduction, recycling, and purchasing environmentally preferable products throughout the educational program.

The education program should focus on raising the awareness of how the RRRP benefits the environment. This awareness must show installation personnel how their participation makes a difference. Base newspapers and community cable channels are prime media avenues to the installation population. Many basic media messages have already been produced by recycling and composting trade associations (See 5.3 Recycling & Composting Associations). These messages can be supplemented by installation specific messages listing the materials recycled, recycling center operating hours, composting program information, RRRP manager phone number, and similar information. Another important message for these media outlets is RRRP progress reports listing the amounts recycled/composted, the savings generated, and the amount of products containing recycled material purchased. By including this information, base personnel see the progress being made and feel that their efforts are going toward a tangible goal.

Another important element of education is community outreach. This includes increasing awareness by: speaking at Commander's Calls and "town meetings" to solicit comments and suggestions for improvements; visiting local schools to educate the children; incorporating the RRRP into the installation's newcomer orientation program; and hosting Earth Day activities. Distribution of information, particularly materials and brochures furnished by recycling and composting associations, provides a reminder to these people at a later date. The education process should always have a positive focus.

4.2 Innovation. Each installation should establish an "I Team" ("I" stands for innovation) with the goal of pursuing new, innovative opportunities for waste reduction and pollution prevention. The team's charter is to examine all imaginative ideas, logistically feasible or not, with the thought that nothing is impossible. Team members should pursue opportunities using their own expertise as well as pulling in knowledge from "field experts" who deal directly with the issues. The I Team should meet regularly to present new ideas and provide updates to previous ideas. Publishing a newsletter highlighting team success will feed the imagination and innovation of other installation personnel.

Another great source of information on innovative processes and successful installation programs is PRO-ACT. To assist Air Force personnel in meeting environmental guidelines and pollution prevention goals, the Air Force Center for Environmental Excellence (AFCEE) sponsors PRO-ACT, an environmental clearinghouse and research service. PRO-ACT researchers draw on the resources of management and operating contractors at various Air Force locations, other Federal and DoD Agencies, the EPA, state agencies, national research and development laboratories and industry.

PRO-ACT offers a broad range of services free of charge to all Air Force personnel. These services include up to 40 hours of research on environmental issues, regulatory alerts and updates, fact sheets on topics of general

interest, bibliographic assistance, database and literature searches and crossfeed information packages containing research summaries, new technology information and lessons-learned documentation.

Currently, PRO-ACT is staffed from 7 a.m. to 6 p.m., Central Time. PRO-ACT can be reached in a variety of ways to include:

- 1-800-233-HELO (233-4356) or DSN 240-4214 or Commercial 210-536-4214
- FAX DSN 240-4254 or 210-536-4254
- WANG e-mail to PRO-ACT
- Internet e-mail to proact@osiris.cso.uiuc.edu
- DENIX e-mail to proact

4.3 Purchasing Environmentally Preferable Products. The purchase of products containing recycled material is a necessary part of closing the reuse/recycling loop. While the RRRP manager is the chief advocate, the Environmental Protection Committee and the RRRP Sub-committee are important supporters. The effectiveness and success of this program requires senior level interest to motivate users and procurers.

The Resource Conservation and Recovery Act (RCRA) requires that EPA Guideline Items be used. The only exceptions to their use are: (1) not meeting performance specifications, (2) only available at an unreasonable price, and (3) not available within a reasonable time frame.

The following is a list of actions that installations may take to establish an aggressive program. Each item is followed by the office(s) typically responsible for the action.

- Review and revise specifications to eliminate preferences for virgin material and encourage the use of EPA Guideline Items, as contained in Engineering Technical Letter 94-7, Dec 94, EPA Guideline Items in Construction and Other Civil Engineering Contracts (Civil Engineer);

- Replace items in the base supply store with environmentally preferable products whenever possible and ensure the General Services Administration's Environmental Products Guide is available for users (Supply);

- Examine current maintenance operations and replace materials with EPA Guideline Items whenever possible (building insulation, concrete and cement containing fly ash: Civil Engineer; re-refined lubricating oil: Civil Engineer, and Transportation; re-tread vehicle tires: Transportation);

- Require all writing, letterhead, and copier paper to meet Executive Order 12873 requirements (Contracting, Supply, Information Management);

- Require all contract submittals, specifications, and change orders meet recycled content requirements and be printed double-sided (Contracting);

- Require all base newspapers, news magazines, and base directories to contain recycled newsprint (Public Affairs);

- Require all newly acquired/leased copy machines to automatically default to two-sided copies (Contracting, Information Management); and

- Require the use of recycled toner cartridges in all copy machines and laser printers (Contracting, Information Management, Supply).

CHAPTER 5 - INFORMATION SOURCES

5.1 Legal Requirements.

Public Law 97-214, 10 U.S.C. Section 2577, Disposal of Recyclable Materials.

Executive Order 12873, Federal Acquisition, Recycling, and Waste Prevention, October 20, 1993.

DoD Instruction 7310.1, Disposition of Proceeds from DoD Sales of Surplus Personal Property, July 10, 1989.

Deputy Under Secretary of Defense (Environmental Security) Memorandum, Policy for DoD Recycling, September 28, 1993.

Air Force Instruction 32-7001, Environmental Budgeting, May 9, 1994.

Air Force Instruction 32-7080, Pollution Prevention Program, May 12, 1994.

5.2 References.

The following publications are available at no charge from the EPA RCRA/Superfund Hotline. Call 1-800-424-9346, Monday through Friday, 8:30 a.m. to 7:30 p.m., EST. In Washington, DC, call 703-412-9810.

Decision-Maker's Guide to Solid Waste Management. EPA/530-SW-89-072. 1989.

Markets for Compost. EPA/530-SW-90-073b. 1993

Promoting Source Reduction and Recyclability in the Marketplace. EPA/530-SW-89-066. 1989.

Recycling Grass Clippings. EPA/530-F-92-012.

Residential Leaf Burning: An Unhealthy Solution to Leaf Disposal. EPA/452-F-92-007.

Sites for Our Solid Waste: A Guidebook for Effective Public Involvement. EPA/530-SW-90-019. 1990.

Yard Waste Composting: A Study of Eight Programs. EPA/530-SW-89-038. 1989.

Yard Waste Composting. EPA/530-SW-91-009.

The following publication is available from the National Technical Information Service (NTIS). Call 1-800-553-6847, Monday through Friday, 8:30 a.m. to 5:30 p.m. In Washington, DC, call 703-487-4650.

Characterization of Municipal Solid Waste in the United States. PB95-147690 (94 Version); cost \$27.

5.3 Recycling & Composting Associations.

Agriculture Composting Association, P. B. Box 608, Belchertown, MA 01007; 413-323-4531

Air-Conditioning and Refrigeration Institute, 4301 North Fairfax Drive, Suite

425, Arlington, VA 22203; 703-524-8800, FAX 703-528-3816

Air and Waste Management Association, P. O. Box 2861, Pittsburgh, PA 15230;
412-232-3444, FAX 412-232-3450

Aluminum Recycling Association, 1000 16th Street Northwest, Suite 400,
Washington, DC 20036; 202-785-0951, FAX 202-785-0210

American Horticultural Society, 7931 East Blvd Drive, Alexandria, VA 22308;
703-768-5700

American Reusable Textile Association, P. O. Box 1073, Largo, FL 34294-1073;
813-531-6698

American Salvage Pool Association, P. O. Box 42450, Phoenix, AZ 85080-2450;
602-581-2500, FAX 602-581-3844

Asphalt Recycling and Reclaiming Association, 3 Church Circle, Suite 250,
Annapolis, MD 21401; 410-267-0023, FAX 410-267-7546

Automotive Recyclers Association, 3975 Fair Ridge Drive, Suite 20 North,
Fairfax, VA 22033-2906; 703-385-1001, FAX 703-385-1494

Bumper Recycling Association North America, 1730 North Lynn Street, Suite 502,
Arlington, VA 22209; 703-525-1191, FAX 703-276-8192

Cement Kiln Recycling Coalition, 1212 New York Avenue Northwest, Suite 500,
Washington, DC 20005-3987; 202-408-9494, FAX 202-408-9392

Composting Council, 114 South Pitt Street, Alexandria, VA 22314-3112;
703-739-2401, FAX 703-739-2407

Independent Battery Manufacturers Association, 100 Larchwood Drive,
Largo, FL 34640; 813-586-1408, FAX 813-586-1400

Institute of Scrap Recycling Industries, 1325 G Street Northwest, Suite 1000,
Washington, DC 20005; 202-466-4050, FAX 202-775-9109

International Cartridge Recycling Association, 1101 Connecticut Avenue
Northwest, Suite 700, Washington, DC 20036-4303;
202-857-1154, FAX 202-223-4579

International Lead Zinc Research Organization, 2525 Meridian Parkway, Durham,
NC 27713; 919-361-4647, FAX 919-361-1957

National Association for Plastic Container Recovery, 1000 North Tryon Street,
Suite 3770, Charlotte, NC 28207-4000; 704-358-8882, FAX 704-358-8467

National Association of Chemical Recyclers, 1200 G Street Northwest, Suite 800,
Washington, DC 20005; 202-434-8740, FAX 202-434-8741

National Wooden Pallet and Container Association, 1800 North Kent Street,
Suite 911, Arlington, VA 22209-2109; 703-527-7667, FAX 703-527-7717

Paper Bag Institute, 505 White Plains Road, Tarrytown, NY 10591;
914-631-0969, FAX 914-631-0333

Steel Recycling Institute, Foster Plaza 10, 680 Andersen Drive, Pittsburgh,

PA 15220-2700; 412-922-2772, FAX 412-922-3213

Washington State Department of Ecology, Waste Reduction, Recycling & Litter
Control Program, P. O. Box 47600, MS 7600, Olympia, WA 98504-7600;
206-438-7482

5.4 Major Command Points of Contact.

Air Combat Command

HQ ACC CES/ESC Mr. Robert Hailey
129 Andrews Street, Suite 102 DSN 574-4430; (804) 764
Langley AFB VA 23665-2769 FAX: Ext 8033

Air Education & Training Command

HQ AETC/CEVP Ms. Debra Snoha
266 F Street West DSN 487-3422; (210) 652
Randolph AFB TX 78150-4321 FAX: Ext 2542

Air Force Materiel Command

HQ AFMC/CEVV Mr. Gopal Annamraju
4225 Logistics Avenue, Suite 8 DSN 787-6312; (513) 257
Wright-Patterson AFB OH FAX: Ext 5875
45433-5747

Air Force Reserve

HQ AFRES/CEVV Mr. Walter Volinsky
155 Second Street DSN 497-1069; (912) 327
Robins AFB GA 31098-1635 FAX: Ext 0108

Air Force Space Command

HQ AFSPC/CEVV Mr. Ralph Clark
150 Vandenberg Street, DSN 692-5028; (719) 554
Suite 1105
Peterson AFB CO 80914-4150 FAX: Ext 2562

Air Force Special Operations Command
HQ AFSOC/CEV Mr. Mike Applegate
100 Bartley Street, Suite 218E DSN 579-4654; (904) 884
Hurlburt Field, FL 32544-5273 FAX: Ext 5982

Air Mobility Command
HQ AMC/CEVC Mr. Mark Horstman
507 A Street DSN 576-5763; (618) 256
Scott AFB IL 62225-5022 FAX: Ext 2693

United States Air Force Academy
HQ USAFA/CEV Ms. Diana Dean
8120 Edgerton Drive, Suite 40 DSN 259-2289; (719) 472
USAF Academy CO 80840-2400 FAX: Ext 3753

Air National Guard
ANGRC/CEVC Ms. Kerri Wildgruber
3500 Fetched Avenue DSN 278-8197; (301) 836
Andrews AFB MD 20331-6008 FAX: Ext 8151

Pacific Air Forces
HQ PACAF/CEV Major George Herr
25 E Street, Suite D306 DSN 315-449-0704; (808) 449
Hickam AFB HI 96853 FAX: Ext 0427

United States Air Forces in Europe
HQ USAFE/CEVP LT Frank Titus, USN
Unit 3050 Box 10 DSN 314-480-6482, 011-49-63714
APO AE 09094 (Ramstein AFB) FAX: Ext 3368

Air Force Center for Environmental Excellence
HQ AFCEE/EP Ms. Nancy Carper
8106 Chenault Road DSN 240-4964; (210) 536
Brooks AFB TX 78235-5318 FAX: Ext 4254

Air Force Civil Engineer Support Agency
HQ AFCEA/CESM Mr. Wayne Fordham
139 Barnes Drive, Suite 1 DSN 523-6465; (904) 283
Tyndall AFB FL 32403-5319 Mr. Gary Jacks
DSN 523-6190; (904) 283
FAX: Ext 6219

HQ United States Air Force
HQ USAF/CEV Captain Dave Maharrey
1260 Air Force Pentagon DSN 227-2797; (703) 69x
Washington DC 20330-1260 FAX: Ext 58943

5.5 Abbreviations & Acronyms.

AAFES - Army and Air Force Exchange System
AFCEE - Air Force Center for Environmental Excellence (Brooks AFB)
AFCESA - Air Force Civil Engineer Support Agency (Eglin AFB)
AFMS - Air Force Manpower Standard
BCAN - Budget Clearing Account Code
DeCA - Defense Commissary Agency
DLA - Defense Logistics Agency
DRMO - Defense Reutilization and Marketing Organization
DRMS - Defense Reutilization and Marketing Service
DUSD(ES) - Deputy Under Secretary of Defense (Environmental Security)
EPA - (US) Environmental Protection Agency
EPC - Environmental Protection Committee
FAA - Federal Aviation Administration
GSA - General Service Administration
MAJCOM - Major Command
MFH - Military Family Housing
MRF - Material Recovery Facility
O&M - Operations and Maintenance
POM - Program Objective Memorandum
PP - Pollution Prevention
QAE - Quality Assurance Evaluation
QRP - Qualified Recycling Program
RCRA - Resource Conservation and Recovery Act
RRRP - Resource, Recovery and Recycling Program
SIC - Service Identification Code
TA - Table of Allowance
UMD - Unit Manning Document
WIMS-ES - Work Information Management System - Environmental Subsystem

AIR COMBAT COMMAND

SOLID WASTE PROGRAM MANAGEMENT GUIDANCE

1. PURPOSE: To comply with federal and local regulations on the management of non-hazardous solid waste and to reduce the generation of such waste in keeping with Air Force goals. Hazardous waste management is not impacted by these requirements, but is covered by AFPAM 32-7043. This guidance is in effect as of 1 Oct 94 and shall remain in effect until rescinded or superseded by HQ ACC/CEV.

2. AUTHORITY: This guidance has been developed in accordance with the Solid Waste Management Regulations detailed in Title 40 of the Code of Federal Regulations (CFR) Parts 240, 241, 243, 257, and 258. This document replaces/supersedes former HQ TAC/SAC policies and applies to all ACC gained units, excluding tenant organizations on non-ACC bases and all ACC gained ANG and AFRES organizations.

3. RESPONSIBILITIES

3.1. The base Civil Engineer is responsible for the collection and disposal of all municipal solid waste. Recycling responsibilities are addressed in the ACC Recycling Program Guidance, Document 93-003, and are not outlined in this guidance package.

4. INTRODUCTION

4.1. The management of solid waste has traditionally involved curbside collection and disposal to a landfill. This kind of strategy is no longer an acceptable way to manage waste. Efforts must now be made to reduce both the volume and toxicity of the nations solid waste to minimize the impact to the environment to the extent possible. This guidance document establishes basic guidelines for the collection and disposal of solid waste and is also intended to support the various pollution prevention efforts at ACC installations.

4.2. This guidance is organized in 13 sections that describe the main guidance requirements and issues. The contents are as follows:

- | | |
|-------------------------|--------------------------------------|
| 1. Purpose | 8. Handling, Storage, and Collection |
| 2. Authority | 9. Disposal |
| 3. Responsibilities | 10. Inspections |
| 4. Introduction | 11. Record keeping and Reporting |
| 5. Definitions | 12. Pollution Prevention |
| 6. General Requirements | 13. References |

7. Management Plan

5. DEFINITIONS

5.1. *Construction and Demolition (C&D) Waste*: The waste building materials, packaging, and rubble resulting from construction, remodeling, repair and demolition operations on pavements, houses, commercial buildings, and other structures.

5.2. *Municipal Solid Waste (MSW)*: Normally, residential and commercial solid waste generated within a community.

5.3. *Solid Waste*: Garbage, refuse, sludges, and other discarded solid materials resulting from industrial, commercial, and agricultural operations, and from community activities. It does not include solid or dissolved material in domestic sewage or other significant pollutants in water resources, such as silt, dissolved or suspended solids in industrial wastewater effluents, dissolved materials in irrigation return flows, or other common water pollutants.

6. GENERAL REQUIREMENTS

6.1. Each major installation must have a solid waste (SW) management program to comply with federal, state, and local solid waste regulations, AFI 32-7042, Solid and Hazardous Waste Compliance, and this guidance. The solid waste management program must contain the following elements: a solid waste management plan (SWMP); handling, storage and collection; disposal; record keeping and reporting and pollution prevention. The solid waste requirements addressing pollution prevention in the form of volume reduction, resource recovery, and recycling are contained in AFI 32-7080, Pollution Prevention. The preferred hierarchy of solid waste reduction and disposal is:

- Source reduction
- Reuse
- Recycling/composting
- Waste to energy
- Landfilling

6.2. Programming and budgeting requirements for facilities, equipment, and manpower, including tipping fees and on-base landfill operations needed to comply with solid waste

collection and disposal requirements are considered utility costs and not environmental compliance costs, reference AFI 32-7001, Environmental Budgeting.

7. MANAGEMENT PLAN All Air Force installations that generate solid waste will have a complete SWMP that meets AFR 91-8, Solid Waste Management, Chapter 3 requirements. The SWMP is an installation-developed document that contains guidance for managing solid waste generated at the installation and supports the development and implementation of state plans required by RCRA Subtitle D. To ensure compliance with federal and state SWMP requirements, Air Force SWMPs contain, at a minimum, the following elements:

- 7.1. Inventory and analysis of solid waste disposal technologies and methods
- 7.2. Inventory of solid waste streams and management methods
- 7.3. Analysis of recovery, conservation, and recycling of solid waste
- 7.4. Evaluation of on site operating municipal solid waste and construction debris landfills (if applicable) and plan implementation
- 7.5. A list of materials prohibited from the MSW waste stream, to include hazardous wastes and other items, banned from landfills by state, local, and federal laws
- 7.6. Procedures to keep the base public informed on prohibited items
- 7.7. A discussion of state or local goals for solid waste reduction and the base's plan to support the local community
- 7.8. Guidelines for the management and disposal of construction and demolition debris, and a review of regulations pertaining to its disposal
- 7.9. Guidelines for the management and disposal of refuse and garbage coming to the base from outside the US

8. HANDLING, STORAGE, AND COLLECTION

8.1. Receptacles, collection routes, collection schedules, and collection equipment (trucks) must meet the criteria of 40 CFR 243, DODD 4165.60, Solid Waste Management, and AFR 91-8, Solid Waste Management, in addition to state and local requirements. All permits required for solid waste handling, storage, and collection (including solid waste transfer facilities) must be obtained and any required maintenance inspections and notifications must be performed.

8.2. Solid waste may be collected by military or civilian personnel or by contractors. The decision on using contractor, civilian, or military personnel for waste collection is the responsibility of the installation commander. When the waste is collected by contractors, the contractor's solid waste collection plan must be consistent with Air Force, federal, state, and local requirements. The vehicles used for collecting and transporting solid waste must meet all applicable standards, such as motor carrier safety standards (49 CFR Parts 390 through 396), noise emission standards for motor carriers engaged in interstate commerce (40 CFR Part 202), and federal motor vehicle safety standards (49 CFR Parts 500 and 580 for collection equipment owned by the federal government only). In addition to the requirements of 40 CFR 243 and DOD Directive 4165.60, the collection equipment must meet the standards established by the American National Standards Institute (ANSI).

9. DISPOSAL

9.1. Solid waste disposal must meet the criteria of 40 CFR 240 and 241, DODD 4165.60., and AFR 91-8, as well as state and local requirements. In addition, these regulations and directives contain specific location and design criteria for new land disposal sites. These requirements apply to disposal of solid waste such as construction debris. Municipal solid waste is a subset of solid waste and is subject to requirements that are more stringent.

9.2. When preparing solid waste management contracts, consideration will be given to establishing a method to quantify the cost avoidance resulting from solid waste reduction efforts. Costs associated with the collection and disposal of solid waste should be driven, completely or in part, by the quantity of waste disposed. Situations where disposal costs are based entirely on an annual flat fee or cost per container per pickup should be avoided or minimized if possible. In addition, solid waste management contracts should be prepared using the standardized Performance Work Statement (PWS) and the PWS generating software created by the Air Force Civil Engineering Support Agency (AFCESA).

9.3. Air Force installations are required to use municipal or regional facilities for the disposal of solid waste whenever feasible. When the use of these facilities is not possible, and solid waste must be disposed of on installation, their construction and operation must comply with aforementioned directives. Base landfills that accept waste after 9 April 94 must meet all the requirements of 40 CFR 258 as well as any corresponding state or local regulations.

9.3.1. Construction and demolition (C&D) debris should be disposed of off the installation whenever possible. If on site C&D waste disposal is necessary, all applicable state,

local, and federal regulations must be adhered to. This includes any permit requirements, siting criteria, operational criteria, and so forth.

9.3.2. Garbage from outside the continental US that is brought on to CONUS installations must be handled and disposed of in a manner to prevent the dissemination of pests and diseases in accordance with US Department of Agriculture regulations, 7 CFR 330.400, and state and local health department regulations.

9.4. Air Force installations must dispose of solid waste in a permitted secure landfill or other state approved site, e.g., thermal-processing facility. Ultimate disposal by recycling and composting are preferred alternatives at Air Force installations. The alternatives are addressed in AFI 32-7080.

9.4.1. Permits and licenses for off-base landfills must be verified to ensure they are being operated in general conformance to permit conditions and applicable regulations.

9.4.2. Each installation must obtain the necessary siting authorization, permits, and licenses for the construction and operation of an on-base solid waste landfill or thermal treatment facility. 40 CFR 240 and 258 contain specific guidelines for the thermal processing of solid wastes and the siting and design criteria for municipal solid waste landfills, respectively.

9.5. Prior to closing an on-base landfill, adequate lead time must be considered to ensure compliance with post-closure requirements. Closure and post closure plans are required before any landfill can be closed. The post-closure maintenance period is typically 30 years, during which maintenance and groundwater monitoring are required. Post-closure procedures may require long-term operation of a system for extracting landfill gas.

10. INSPECTIONS

10.1. The solid waste program involves scheduled and unscheduled inspections of solid waste collection, transfer, and disposal facilities. Internal and external audits will be performed according to AFI 32-7045, Environmental Compliance Assessment and Management Program. Inspection findings will be properly documented and corrective actions promptly implemented. Consistent with security requirements, environmental compliance inspections of solid waste operations and activities will be supported.

10.2. Each installation will conduct at least quarterly inspections of industrial shop waste receptacles to verify that HW is not being deposited. The records are to be retained for a

minimum of two years after the date of the inspection. Installation personnel must be informed about materials that are prohibited from disposal in solid waste receptacles.

10.3. Each installation will conduct at least quarterly inspections of any on site solid waste contractor storage areas to ensure that equipment being used meets the requirements outlined in section 8.1, and that the area is being maintained in a manner that does not represent a threat to public health or the environment.

11. RECORD KEEPING AND REPORTING Daily operating records will be kept on Air Force Form 1453, "Refuse Collection and Disposal Report," on a truck-by-truck basis. These reports will be consolidated monthly onto Air Force Form 1452, "Daily Log of Refuse and Salvage Collections." Installations must obtain approval from HQ USAF/CE, through HQ ACC/CE, to use different forms for tracking solid waste. In addition, solid waste management activities must be reported according to AFI 32-7002.

11.1 In support of the Air Force solid waste reduction goals it is necessary to maintain complete and accurate records on the quantity of waste disposed. Records must be maintained on the quantity, by weight, of waste recycled, composted, burned for energy recovery, and landfilled.

12. POLLUTION PREVENTION Volume reduction, resource recovery, and recycling activities at Air Force installations are not within the scope of this guidance document. Those activities are required and implemented in accordance with AFI 32-7080 and ACC Environmental Program Guidance Documents 93-002 and 93-003.

13. REFERENCES

13.1. ACC Pollution Prevention Program Guidance, Document 93-002, 4 May 1993, Stephen B. Croker, Vice Commander

13.2. ACC Recycling Program Guidance, Document 93-003, 1 July 1993, Stephen B. Croker, Vice Commander

13.3. AFI 32-7001, Environmental Budgeting

13.4. AFI 32-7042, Solid and Hazardous Waste Compliance

13.5. AFI 32-7045, Environmental Compliance Assessment and Management Program

13.6. AFI 32-7080, Pollution Prevention

13.7. AFR 91-8, Solid Waste Management, May 1990

13.8. Code of Federal Regulations, Title 7, 330.400

13.9. Code of Federal Regulations, Title 40, Parts 202, 240, 241, 243, 257, 258

13.10. Code of Federal Regulations, Title 49, Parts 390 - 396, 500, 580

13.11. DODD 4165.60, Solid Waste Management