Green Environmental Management System (GEMS)

Permit Application

Submitted by:

173d Fighter Wing

Oregon Air National Guard
Kingsley Field
Klamath Falls, Oregon

Kingsley Field "Six-Ship" Flight Over Crater Lake

Upper Left:	Kingsley Field's air-to-air training mission is now flown in the F-15 aircraft.
Center:	F-16 aircraft fulfilled Kingsley Field's air-to-air training mission from 1989 to 1998.
Lower Right:	F-4 aircraft were the primary assigned aircraft when the Air National Guard activated the fighter training squadron at Kingsley Field in 1983.

Introduction

Aviation activity began at the present day site of Kingsley Field in 1928 when bond sales were approved to construct an airport. During World War II, Kingsley Field was selected as a site for a Naval Air Station; in January 1946, the Navy deactivated the station. In 1954, the United States Air Force (USAF) established an all-weather fighter-interceptor squadron and an aircraft control and warning squadron at the municipal airport. In 1957, the USAF officially dedicated facilities at Klamath Falls Municipal Airport as Kingsley Field.

The USAF removed active duty units from Kingsley Field in 1979 and reduced the installation's status to an alert detachment site for air defense fighters. The 8123rd Fighter Interceptor Training Squadron (8123 FITS) of the Oregon ANG was activated in January 1983. In 1984, the 8123 FITS was redesignated the 114th Tactical Fighter Training Squadron (114 TFTS), and Kingsley Field officially became an ANG installation. By 1996, after several designations, the unit was assigned to its present designation as the 173 Fighter Wing (FW).

The 173 FW currently maintains and operates a Primary Aircraft Inventory (PAI) of eighteen F-15 aircraft in support of its air-to-air training mission. As a training unit, the primary mission of the 173 FW is to train F-15 pilots for air-to-air combat.

Kingsley Field employs approximately 500 full-time personnel, working in both military and civilian capacities. In direct support of the mission, aircraft maintenance functions include, but are not limited to: Welding, Corrosion Control, Aircraft Refueling, Liquid Fuels and Barrier Maintenance, Aircraft Engine Repair, Fuel Cell Maintenance, Metals Technology, Weapons Loading and Munitions Storage, Avionics, and Electronic Systems Repair. A full time Fire Department, Clinic, Vehicle Maintenance Facility, Audio-Visual Services, Air Traffic Control, and Civil Engineering are a handful of the many support services. In addition, contracted services have accomplished extensive infrastructure projects, some of which include facility demolitions and renovations, new facility construction, and repair of aircraft runways and airfield pavements. Contracted projects have totaled over 50 million dollars in the last 10 years.

In the 1980's, the United States Air Force determined that all installations needed an Environmental Management Office (EMO) with employees dedicated to administering an environmental program. In 1991, the Air National Guard (ANG) established and staffed an environmental management office at every ANG installation. At the same time, a governing directorate was established at the Headquarters level to oversee the program. The ANG Environmental Directorate is subject to the authority of the Air Force Environmental Directorate. These directorates provide oversight and specific program guidance in every media. In an effort to standardize Air Force environmental programs in every state, oversight and guidance is often more stringent than that required by law.

The focus of Kingsley Field's environmental management program, since its inception in 1991, has been minimizing environmental impact. Before the establishment of an Environmental Management Office, environmental management was an additional duty for the assistant Base Civil Engineer. In 1991, Kingsley Field established an Environmental Management Office, consisting of an Environmental Officer and one position entitled Bioenvironmental Technician. The Bioenvironmental Technician duties primarily entailed industrial hygiene, occupational health, and environmental sampling.

Early focus of the environmental program included evaluation and identification of environmental aspects, site remediation and installation restoration, removal of underground storage tanks, acquisition of applicable permits, and evaluation and improvement of wastewater disposal systems. In early 1992, an additional employee was hired to meet the increasing needs of the environmental management program. A second bioenvironmental employee was also added in 1994. In 1995, Air Force environmental emphasis began to transition from cleanup and installation restoration to pollution prevention. While cleanup projects continued, the focus shifted toward reductions in: solid waste, EPA 17 toxics, industrial wastewater discharge, and hazardous waste. During recent years, the Environmental Management Office has incorporated the hazardous materials pharmacy concept and continued to expand and refine its pollution prevention efforts.

As the 173 FW environmental program developed, community outreach and involvement also grew. Since 1992, an EMO representative has consistently served as a member of the Klamath County Solid Waste Advisory Committee. EMO members have participated on Oregon Institute of Technology's board for environmental curriculum establishment and served as guest lecturers for the environmental engineering program. We continue to interact with Sustainable Communities, a local citizen's action group, since initial affiliation in early 1999.

Over the lifetime of the Kingsley Field environmental program, a number of significant accomplishments have been realized. For example, hazardous waste has been reduced from 24,010 pounds in 1991 to 11,660 pounds in 1999 and total tons of recyclable materials increased from 39 tons in 1991 to 140 tons in 1999. In addition, twelve cleanup sites activated in 1991 have been reduced to one site in 1999, more than 30 underground storage tanks have been removed, and seven of nine identified NPDES sites have been eliminated through the use of pollution prevention technology.

With the 1998 conversion from single engine F-16 aircraft to dual engine F-15 aircraft, we have established new baselines for all environmental protocols. As well as having two engines, F-15's are older, more complex aircraft having many more redundant systems than the F-16. Consequently, these aircraft require more industrial activity to maintain.

Today, environmental efforts center on applying the pollution prevention knowledge we have acquired in the last nine years to a new aircraft and a host of new industrial processes. In addition to continuous reduction of impacts, we are now incorporating sustainability and increased community involvement. Kingsley Field's Policy Directive (Tab 1) defines the future perspective and direction of the EMS. The Operating Instruction (Tab 2) implements the policy and outlines specific procedures to accomplish established objectives.

Oregon

Green Environmental Management System

(GEMS)

Permit Application

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Oregon Air National Guard
173d Fighter Wing
Kingsley Field
Klamath Falls, Oregon 97603

OREGON AIR NATIONAL GUARD
173d Fighter Wing (ANG) (AETC)
Kingsley Field
Klamath Falls, OR 97603-0400

KINGSLEY FIELD POLICY DIRECTIVE 32-70
1 August 2000

Civil Engineering

ENVIRONMENTAL MANAGEMENT SYSTEM (EMS)

OPR: 173 FW/EMO (1Lt Joseph R. Harris)
Certified by: 173 SPTG/CC (LtCol Robert R. Dolan)
Pages: 1
Distribution: F

This directive establishes the environmental policy for Kingsley Field's Environmental Management System (EMS). The purpose of the EMS is to provide a framework of systematic processes and procedures to manage the organization's environmental program and communicate and evaluate environmental performance.

1. Environmental Policy:

1.1. Kingsley Field is a leader in promoting environmental stewardship. Continuous improvement is the hallmark of our environmental management system. All members; military, civilian, and contractor, will perform their duties in a manner that considers the impacts of their actions on the environment and promotes sustainability of resources. A commitment to public interaction ensures Kingsley Field continually integrates community concerns into EMS objectives.

1.2. Kingsley Field regards full compliance with all applicable legal requirements as the basis from which we move forward. Kingsley Field will utilize the intent of regulatory requirements to establish targets and goals that exceed environmental mandates.

1.3. Pollution is a direct measure of inefficiencies in industrial processes. Through pollution minimization, Kingsley Field personnel maximize resources available for mission accomplishment. All personnel will adhere to the pollution prevention hierarchy. Source reduction is the first choice in managing all aspects of the environmental program. Material substitution, reuse, and recycling are preferred alternatives. Disposal is a last resort.

2. Authorities and Responsibilities:

2.1. The Environmental Protection Committee (EPC) is the environmental steering group for Kingsley Field. The EPC will continuously assess the installation’s environmental targets and objectives and take corrective action as necessary.

2.2. The Environmental Management Office will implement and manage the Kingsley Field environmental program.

2.3. Environmental program execution will be the responsibility of all members of Kingsley Field.

FOR THE COMMANDER

PAUL R. LYMAN, MSgt, ORANG
Chief, Customer Support

OREGON AIR NATIONAL GUARD
173d Fighter Wing (ANG) (AETC)
Kingsley Field
Klamath Falls, OR 97603-0400

KINGSLEY FIELD INSTRUCTION 32-7001
1 August 2000

Civil Engineering

ENVIRONMENTAL MANAGEMENT SYSTEM

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

OPR: 173 FW/EMO (1Lt Joseph R. Harris) Certified by: 173 SPTG/CC (LtCol Robert R. Dolan)
Pages: 15
Distribution: F

This instruction implements KFPD 32-70, *Environmental Management System (EMS)* and provides guidance for the management and execution of the Kingsley Field EMS. It applies to all personnel, military, civilian and contractor, performing duties at Kingsley Field.

1. GENERAL:

1.1. Background. The procedures in this instruction are essential to ensure compliance with laws, directives, executive orders, and policies.

1.2. Concept. This instruction is not intended to duplicate the reference documents identified in this instruction, but is intended to provide a framework on how Kingsley Field complies with KFPD 32-70.

1.3. Responsibilities.

1.3.1. The Kingsley Field Base Commander has the overall authority and responsibility for implementing KFPD 32-70.

1.3.2. The Environmental Protection Committee (EPC) is the EMS steering group. The EPC consists of senior base leadership as described in AFI 32-7005, *Environmental Protection Committees*. The EPC oversees compliance with KFPD 32-70, establishes the objectives and targets of the EMS, and evaluates the performance of the EMS against established objectives and goals and makes changes to accommodate new or modified activities, procedures, or services.

1.3.3. The Environmental Management Office (EMO) is comprised of the Environmental Manager, the Natural Resource Specialist, two Industrial Hygienists and support staff as available. The EMO oversees the day-to-day administration of the Kingsley Field EMS.

1.3.4. Industrial Shop Supervisors oversee environmental aspects and programs and ensure compliance with EMS policies and directives for their shop. The following industrial shops are responsible for management of the environmental aspects and program elements within their area of responsibility:

AGE Shop
Alert
ATS
Avionics Flightline
Barrier Maintenance/Liquid Fuels
Base Gym
Civil Engineering
Communications Center
Corrosion Control/Structural Maintenance
Egress Shop
Electro Environmental Shop
Engine Shop & Hush House
Fire Department
Flightline
Fuel Cell Maintenance
Hazardous Waste
Inspection Docks
Life Support
Medical Aid Station
Metals Tech
Munitions
NDI Shop
Parachute Shop
Photo Lab
PMEL
Pneudraulics
POL Dist/POL Fuel
R & R Shop
Security Forces
Supply Warehouse
TMO
Trapper's Inn/Billeting
Vehicle Maintenance/Refuel/Washrack
Weapons Shop
116th ACS/OLAA
270th ATCS

1.3.5. Shop Environmental Managers (SEMs) are Kingsley Field members that represent their shops in all environmental matters. SEMs implement EMS policies and directives at the shop level.

1.3.6. All employees will perform their duties in a manner that complies with EMS policies and directives.

2. PLANNING:

2.1. Environmental Aspects. EMO will continually identify and evaluate environmental aspects through the following processes:

2.2.1. National Environmental Policy Act (NEPA) Process: NEPA reviews will determine environmental aspects for each new process, project, or construction on Kingsley Field. In addition, EMO will attend the monthly Work Order Review Meeting to review new and ongoing facilities, projects, and processes in accordance with AFI 32-7061, *Environmental Impact Analysis Process.*

2.2.2. EMO performs environmental audits annually, at a minimum, for each industrial shop. EMO will review all previously identified aspects and evaluate shop operations in an effort to identify new environmental aspects.

2.2.3. The Hazardous Materials Management Program (HMMP) Team is a vital component of the EMS. The HMMP will screen hazardous material requisitions, determine health and environmental impacts, and recommend substitutions that reduce those impacts in accordance with AFI 32-7086, *Hazardous Materials Management*.

2.2.4. Air Installation Compatible Use Zone (AICUZ): This program identifies and documents environmental noise aspects of Kingsley Field airfield operations. EMO will manage this program in accordance with AFI 32-7063, *Air Installation Compatible Use Zone Program.*

2.2.5. Employee Involvement: EMO will emphasize environmental awareness and aspect identification through the training and communication specified in this instruction. Employees will utilize training and communication to identify and recognize environmental aspects.

3. LEGAL AND OTHER REQUIREMENTS:

3.1 Environmental Requirements. The EMO, in conjunction with the Staff Judge Advocate (JA), will continually review and ensure access to the following environmental requirements affecting Kingsley Field:

40 Code of Federal Regulations (CFR)
Oregon Administrative Rules (OAR)
Oregon Revised Statutes (ORS)
City and local mandates
Executive Orders
Department of Defense (DoD) Environmental Compliance Assessment and Management Program (ECAMP) Directives
Air Force regulatory guidance

3.2. Additional Information Sources. To maintain legal currency with regulatory and other applicable guidance, EMO will review the following information: Federal Register, State Register Notices, Regional Environmental Office (REO) quarterly newsletters and environmental alerts, revisions to The Environmental Assessment and Management (TEAM) Guide and supplemental protocols, and Air Force Center for Environmental Excellence (AFCEE) periodicals and electronic bulletins.

3.3. EMO Interpretation. EMO will interpret the intent of regulatory guidance affecting Kingsley Field and communicate legal requirements, as well as the EMS targets and goals that exceed environmental mandates, to base personnel through policy letters and directives, management plans, EPC meetings, operating instructions, and training.

4. OBJECTIVES AND TARGETS:

4.1. Environmental Impacts. The overarching goal of the EMS is continual reduction and elimination of the impact Kingsley Field's mission has on the environment and the community. The following impacts will be measured and analyzed by EMO:

Total Plant Site Emissions (Tons per year)
Energy Consumption (BTU per heating/cooling degree-day)
Hazardous Materials Usage (Pounds per year)
Hazardous Waste Generation (Pounds per year)
Hazardous Waste Diversion (Pounds per year)
Solid Waste Generation (Pounds per year)
Solid Waste Diversion (Pounds per year)
Pesticide Application (Pounds active ingredient per year)
Stormwater Quality (Contaminant levels)
Industrial Wastewater (Contaminant levels)

4.2. Organizational Objectives. EMO will translate the overall goal of continual reduction into section/shop level objectives. Working as partners, EMO and shop personnel will develop procedures to achieve section/shop level objectives.

5. ENVIRONMENTAL MANAGEMENT PROGRAM:

5.1. Core Elements: EMO will establish and maintain the following core elements of the EMS to achieve objectives and targets:

5.1.1. Air Quality Program: EMO will obtain and maintain required permits, monitor all permitted pollutants, and evaluate sources for potential reductions.

5.1.2. Water Quality Program: EMO will obtain and maintain the required industrial wastewater permit. All discharge points will be continuously evaluated for contaminant reduction or elimination. EMO will maintain the required stormwater permit obtained and held by the City of Klamath Falls. EMO will ensure stormwater contaminant levels remain as near zero as feasible.

5.1.3. Hazardous Materials Management Program: EMO will oversee this program in accordance with AFI 32-7086, *Hazardous Materials Management*. This regulation implements a Hazardous Material (HazMat) Pharmacy as the single control point for requisition, inventory,

issue, and turn in of all hazardous materials. Minimization and centralized inventory control will be the primary considerations in the management of this program.

5.1.4. Hazardous Waste Management Program: EMO will manage this program in accordance with the Kingsley Field Hazardous Waste Management Plan. All waste streams will be continuously evaluated for elimination, minimization, or diversion.

5.1.5. Hazardous Waste Diversion Program: EMO will divert eligible hazardous waste to alternative categories, such as Universal and Non-regulated waste. A concerted effort will be made to maximize diversion efforts.

5.1.6. Solid Waste Diversion Program: EMO will continuously evaluate all waste streams for potential reuse, reduction, and recycling opportunities. EMO will maintain and oversee the Qualified Recycling Program (QRP).

5.1.7. Installation Restoration Program: EMO will identify and facilitate completion of remediation and restoration activities to the maximum extent possible.

5.1.8. Natural and Cultural Resources Program: EMO will insure all current and future resources identified in periodic surveys by Air National Guard Readiness Center (ANGRC) contractors are managed in accordance with AFI 32-7064, *Integrated Natural Resources Management,* AFI 32-7065, *Cultural Resources Management,* and DoD guidance.

5.1.9. Pesticide Management Program: EMO will coordinate with Civil Engineering pesticide application personnel in an effort to minimize active ingredients applied. EMO will evaluate active ingredients and application methods annually to identify and implement chemical and/or application equipment alternatives.

5.1.10. Toxic Substances Management Program: EMO will ensure lead-based paint and asbestos are systematically eliminated in conjunction with planned facility upgrades and maintenance. EMO will ensure the Air Force lead-based paint policy is followed. EMO will coordinate with ANG Civil Engineering Technical Services Center Asbestos Management Team for Asbestos Management Plan updates and installation surveys at least every three years.

6. TRAINING, AWARENESS, AND COMPETENCE:

6.1. Elements of Training. EMO will develop and conduct shop specific training based on the results of annual EMO environmental audits. Training will focus on environmental aspects and impacts managed by the shop, with emphasis on deficient areas discovered during the annual audit. Photographs of shop deficiencies will be included in training materials when pertinent. The consequences of non-compliance with the EMS policy will be briefed. In addition, formal training for areas such as hazardous waste management will be conducted as required by 40 CFRs.

6.2. Training Documentation. Training sessions will be conducted in the industrial shop. EMO will provide an unabbreviated copy of the training to the shop, which will be filed in Tab C of KFI 32-7042, *Environmental Hazardous Waste Folder.* A copy of the training will also be maintained in the EMO shop folder. Reference copies of the last three shop training sessions will be maintained in Tab C and in the EMO shop folder.

7. COMMUNICATION:

7.1. EPC Meetings. The EPC, to include the Base Commander, Environmental Manager, and all other EMO members, will convene quarterly to review completed shop environmental audit findings, discuss the status of EMO projects, and address other issues pertaining to overall EMS performance.

7.2. Organizational Communication. EMO and EPC members will communicate EMS policy, instructions, and EMS performance to industrial shops using training, reports, bulletin boards, email, and web site data maintained on the Local Area Network (LAN).

7.3. Public Communication. EMO will conduct an annual public meeting to encourage public interaction and integrate community concerns into EMS objectives and goals. The meeting will be advertised in the local newspaper at least one month in advance. Meeting topics will include a review of aspect identification methods, identified aspects and their management, annual audit findings, corrective actions, and EMS objectives and achievements. EMO will solicit community feedback on the meeting's content for the purpose of incorporating public concerns into aspect management. EMO will document the meetings and maintain minutes in the EM office and on the environmental website. EMO will also maintain all NEPA documents, annual public meeting minutes, and records of remediation and restoration activities in the document repository at the Klamath County Library. EMO will use additional avenues for public communication as needed, such as 173 FW Public Affairs Office and press releases.

7.4. Awareness and Recognition. KFI 32-7002, *Environmental Management Recognition Program,* establishes an ongoing and credible recognition program for Kingsley Field personnel who contribute significantly to the critical facets of environmental compliance and pollution prevention efforts. This awards program recognizes superior environmental stewardship and communicates EMS values and policies.

8. ENVIRONMENTAL DOCUMENTATION: See Attachment 1 for a listing of guidance documentation.

9. DOCUMENT CONTROL:

9.1. Publications and Documents. Environmental publications and documents will be maintained in accordance with the AFPD 37-1, *Air Force Information Management*. Documents will be organized in publication libraries or file systems maintained by EMO. Documents will be reviewed and updated annually.

9.2. Document Access. Document control will also be achieved using the EMO Web Page, ensuring all personnel have access to applicable regulations, management plans, and standardized operating procedures. EMO will maintain the web page to ensure obsolete documents are promptly replaced or removed. Documents archived for legal purposes or knowledge preservation will be identified and maintained in accordance with AFPD 37-1.

10. OPERATIONAL CONTROL: EMO will formulate, use, and maintain the following specific guidance and compliance tools to ensure operations and activities with environmental aspects are properly controlled:

10.1. Legal/Regulatory. See Attachment 1 for legal/regulatory guidance.

10.2. Policies and plans.

Air Force Lead-based Paint Policy
Asbestos Management Plan
Hazardous Waste Management Plan
Oil and Hazardous Substances Spill Prevention and Response Plan
Pesticide Management Plan
Pollution Prevention Plan
Qualified Recycling Plan (QRP)
Source Emission Reduction Plan
Storm Water Pollution Prevention Plan and Best Management Practices (BMP)
KFI 32-7042, Environmental Hazardous Waste Folder

10.3. Guides and checklists.

The Environmental Assessment and Management (TEAM) Guide
Environmental Management Information System (EMIS) User's Guide
Environmental Management Self-Assessment Tool (EMSAT)
ECAMP Checklist
EMS Audit Checklist
Contractor Guide (Procedural Handout)

10.4. Automated Systems.

ECAMP Database
HazMat Pharmacy
Hazardous Waste Inventory Database
Hazardous Waste Shipment Schedule
Integrated Engineering Management System (IEMS)
MicroBAS Accounting System

10.5. Forms and Labels.

Air Force Form 813, **Request for Environmental Impact Analysis**
Air Force Form 3952, **Chemical/Hazardous Material Request Authorization**
DD Form 1348-1A, **Issue/Release/Receipt Document** (Used for Hazardous Waste Shipment)
DD Form 1532, **Pesticide Management Report**
DD Form 2522, **Hazardous Chemical Warning Label** (Used for Secondary Containers)
DRMS Form 1930, **Hazardous Waste Profile Sheet**
EPA Form 6700-22, **Uniform Hazardous Waste Manifest**
EMIS Hazardous Materials Tracking Label
DOT prescribed labels and placards for Hazardous Waste, Non-regulated Waste, and Universal Waste

11. EMERGENCY PREPAREDNESS AND RESPONSE:

11.1. Spill Response. The EMO will oversee the spill-preparedness and response plan and planning function. Kingsley Field personnel will immediately notify EMO of all spill related incidents, regardless of quantity. The EMO will maintain a Spill Log and report spills and spill quantities to regulatory agencies, as required. The first responder spill team will be manned and managed by Civil

Engineering in accordance with the 173 FW Oil and Hazardous Substances Spill Prevention and Response Plan.

11.2. Emergency/Disaster Preparedness. To prepare for actual emergencies, disaster response exercises will be conducted in accordance with OPLAN 32-1, *173 FW Disaster Preparedness Operations Plan*. EMO will monitor and evaluate the environmental impacts associated with emergency or disaster scenarios and respond in a manner that aggressively addresses environmental sustainability. Newly identified remediation and restoration activities will be reported to regulatory agencies by EMO.

12. MONITORING AND MEASUREMENT:

12.1 Monitoring. EMO will ensure stormwater is monitored at least annually, although permit requirements may be less stringent. EMO will ensure adherence to all other monitoring schedules established in permits. Air Force Laboratories at Brooks AFB, Texas will be the primary laboratory used for sample analysis. EMS performance will be measured in the following areas:

12.1.1. Total Plant Site Emissions (Tons per CY): In addition to monitoring individual pollutants for compliance, EMO will track and trend total emissions as a measurement of EMS performance. The five pollutants regulated in the air permit will be totaled to achieve a total plant site emissions per year calculation. Tons emitted per flying hour will also be calculated for data normalization purposes.

12.1.2. Energy Consumption (BTU per heating/cooling degree-day): EMO will obtain electric and gas utility consumption data from Civil Engineering. All energy units will be converted to BTU per heating/cooling degree-day. EMO will use data for reporting and trend analysis purposes.

12.1.3. Hazardous Materials Usage (Pounds per CY): EMO will obtain this data from the HazMat Pharmacy. Pounds of materials used per flying hour will also be calculated for data normalization purposes.

12.1.4. Hazardous Waste Generation (Pounds per CY): EMO will generate and track this data. Pounds of waste generated per flying hour will also be calculated for data normalization purposes.

12.1.5. Hazardous Waste Diversion (Pounds per CY): EMO will track total annual generation of Universal Waste and Non-Regulated waste in pounds per year.

12.1.6. Solid Waste Generation (Tons per CY): EMO will obtain this data from Civil Engineering and calculate annual totals.

12.1.7. Solid Waste Diversion (% of solid waste diverted): EMO will generate this data. Total tons of recyclable material will be divided by total tons of solid waste generated.

12.1.8. Pesticide Application (Pounds active ingredient per year): EMO will obtain raw data on pesticide/herbicide application from Civil Engineering and calculate active ingredient application totals. Active ingredient applied per inch of annual rainfall will be calculated for data normalization purposes.

12.1.9. Stormwater Quality (Contaminant levels): EMO will generate this data from the annual monitoring results. The levels for each contaminant entering the base will be subtracted from the contaminant levels exiting the base. Zero contaminant increase will be the EMS goal. EMO will seek out and eliminate any sources of contamination.

12.2. Industrial Shop Audits. EMO will perform an environmental audit of all industrial shops annually, at a minimum. The audit will assess a shop's status of compliance with EMS policy and direction. EMO will review all previously identified environmental aspects and current methods for their management. Aspect management methods will be evaluated for potential improvements in environmental performance. Changes in shop processes, potential chemical substitutions, regulatory guidance, and pollution prevention equipment technology will all be considered in the evaluation. EMO will identify, evaluate, and establish management methods for newly identified aspects and their associated impacts.

12.3. Audit Documentation. EMO will document audit results on a shop inspection report. A copy of the report will be given to the shop in a timely manner. The signed original will be maintained in EMO and a copy will be available on the environmental website. A copy will be maintained in Tab C of the Shop's Hazardous Waste Folder and in EMO's shop folder. EMO will maintain a database of audit results and their corresponding corrective actions.

13. CHECKING AND CORRECTIVE ACTION:

13.1. Corrective Actions. On every shop inspection report, EMO will include a suggested corrective action for every deficiency. The suggested action will eliminate the deficiency and bring the shop back into compliance with EMS policy and directives. On the report, EMO will include a block where a shop member can annotate the shop's corrective action. The shop will document the corrective action in the response block provided or on a separate sheet attached to the audit report. EMO will insure all individuals in the shop's chain of command, up to the Kingsley Field Base Commander, sign the report to signify their endorsement of the shop's corrective action.

13.2. Policy/Procedural Changes. If a shop's corrective action results in a change in EMS policy, EMO will issue an email to document the policy change. A printed copy of the email will be filed in Tab C of the Environmental Hazardous Waste Folder by the SEM and in the EMO shop folder. If the corrective action results in a change to published EMS policies or directives, EMO will revise the publication and file a copy of the revision in the EMO shop folder. The SEM will also file a copy of the revision in Tab C.

14. RECORDS:

14.1. EMO Record Management. EMO will maintain records in accordance with the Air Force Files Maintenance and Disposition System specified in AFI 37-122, *"Air Force Records Management Program"* and AFI 37-138, *"Records Disposition--Procedures and Responsibilities."* Specific records will be maintained indefinitely due to the possibility of future regulatory requirements. Records are maintained within the EMO file system. Record dispositions are outlined in the Files Management and Disposition Plan.

14.2. Industrial Shop Records. Shop specific records will be maintained by shop SEMs. Examples of such records include inspection reports, training records, and other miscellaneous items. Records will be maintained in accordance with policy established by the organization and EMO guidance.

15. ENVIRONMENTAL MANAGEMENT SYSTEM AUDIT:

15.1. Internal Audit. The EMO, under the direction of the EPC, will conduct an annual internal audit during those years an external ECAMP inspection is not conducted. The Environmental Management Self-Assessment Tool (EMSAT) will be used to accomplish internal audits. In addition, a locally developed checklist will function to ensure EMS processes specific to Kingsley Field are evaluated. Audit results will be reviewed during the EPC meeting and corrective actions will be defined.

15.2. Documentation. The status of audit findings and the corrective actions taken will be documented by an EMSAT report and checklist responses. An internal audit report will remain on file in the EMO office and audit results will be briefed at the EPC meeting (EPC minutes can be used for documentation). The external ECAMP report will be maintained in place of the internal audit report for those years an external audit is conducted.

16. MANAGEMENT REVIEW:

16.1. Program Review. In order to achieve continual improvement, sustainability, and effectiveness of its environmental management system, Kingsley Field's senior management will review and evaluate the overall environmental management system, to include all environmental programs and internal audit results.

16.2. Documentation. EMO will make all EMS documentation available for management review. A report of EMS performance will be kept on file in EMO, in the repository at the Klamath County Library, and on the environmental website.

FOR THE COMMANDER

PAUL R. LYMAN, MSgt, ORANG
Chief, Customer Support

Attachment 1
GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

Environmental Laws:

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).

Executive Orders:

Order Number	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*	October 13, 1978
12580	*Superfund Implementation*	July 23, 1987
12777	*Implementation of the Federal Water Pollution Control Act and Oil Pollution Control Act*	October 18, 1991
12902	*Energy Efficient and Water Conservation at Federal Facilities*	March 8, 1994
13148	*Greening the Government Through Leadership in Environmental Management*	April 21, 2000

DoD Publications:

Publication Number	Publication Title	Date
DoD Instruction 4150.7	*Pest Management Program*	April 22, 1996
DoD Instruction 4165.57, With Change 1	*Air Installation Compatible Use Zones*	November 8, 1977
DoD Directive 4700.4	*Natural Resource Management Program*	January 24, 1989
DoD Directive 4715.1	*Environmental Security*	February 24, 1996
DoD Directive 4715.3	*Environmental Conservation Program*	May 3, 1996
DoD Instruction 4715.4	*Pollution Prevention*	June 18, 1996
DoD Instruction 4715.6	*Environmental Compliance*	April 24, 1996
DoD Instruction 4715.7	*Environmental Restoration Program*	April 22, 1996
DoD Instruction 4715.9	*Environmental Planning and Analysis*	May 3, 1996

Publication Number	Publication Title	Date
DoD Directive 5030.41, With Change 1	*Oil and Hazardous Substances Pollution Prevention and Contingency Program*	June 1, 1977
DoD Directive 6230.1	*Safe Drinking Water*	April 24, 1978

Air Force Instructions:

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

Publication Number	Publication Title	Former Publication
AFI 32-7045	*Environmental Compliance - Assessment and Management Program*	AFR 19-16
AFI 32-7047	*Compliance Tracking and Reporting*	No Former Publication
Conservation:		
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 Publication
Pollution Prevention:		
AFI 32-7080	*Pollution Prevention Program*	AFR 19-15
Kingsley Field Policy Directives and Instructions:		
KFPD 32-70	*Environmental Management System (EMS)*	No Former Publication
KFI 32-7001	*Environmental Management System*	No Former Publication
KFI 32-7002	*Environmental Management Recognition Program*	No Former Publication
KFI 32-7042	*Environmental Hazardous Waste Folder*	No Former Publication

Attachment 2
LISTING OF ORGANIZATIONS WITH ENVIRONMENTAL ASPECTS

Installation Commander

173 FW/CC - Base Commander and Environmental Protection Committee Chair
173 FW/CV - Vice Commander

Product Directorates

173 FW/EM - Environmental Management
173 FW/FM - Financial Management
173 FW/JA - Staff Judge Advocate
173 FW/PA - Office of Public Affairs
173 FW/SE - Safety Office

Kingsley Field Groups/Squadrons

173 LG/CC - Logistics Group Commander
173 OG/CC - Operations Group Commander
173 SPTG/CC - Support Group Commander
114 FS - Fighter Squadron
173 AGS - Aircraft Generation Squadron
173 CES - Civil Engineering Squadron
173 LGS - Logistics Squadron
173 MXS - Maintenance Squadron
173 SFS - Security Forces Squadron
173 MDS - Medical Squadron

Tenants

116th ACS/OLAA - Air Control Squadron
270th ATCS - Air Traffic Control Squadron

GENERAL NOTE: Includes all contractors, state employees, and personnel performing government work.

GEMS PERMIT APPLICATION FORM

1. **Facility Name/Site Identifier:** Kingsley Field Air National Guard Base

2. **Legal name** as registered with the Oregon Corporations Division: Same

3. **Mailing address**

a) PO box or street number: 211 Arnold Ave
b) city, state, and zip code: Klamath Falls, OR 96073-1918

4. **Facility location address**

a) PO box or street number: Same
b) city, state, and zip code:
c) county: Klamath

5. **Contact information**

a) name and title: Joseph R. Harris, 1Lt, ORANG
b) email address: Joe.Harris@orklam.ang.af.mil
c) area code and telephone number: (541) 885-6326
d) mailing address: Same

6. **Business activity information**

a) primary SIC Code: 4581
b)
c) Facility description: Air National Guard Training Facility. F-15 air-to-air tactical training unit.

7. Current regulatory status.

Regulatory Status Category		Permit Number (if issued)	Permitting or Compliance Issues
RCRA: Is your facility			
A Large Quantity Generator?	☐Y ☒N ☐DK		
A Small Quantity Generator?	☒Y ☐N ☐DK		No "non-compliance" have been identified since 1989
A Conditionally Exempt Generator?	☐Y ☒N ☐DK		
A TSD Facility?	☐Y ☒N ☐DK		
AIR: Is your facility			
Permitted under a state or local ACDP?	☒Y ☐N ☐DK	18-0097	
Permitted under a Title V permit?	☐Y ☒N ☐DK		
Not required to have a permit?	☐Y ☒N ☐DK		
WATER: Is your facility			
Permitted under a state WPCF permit?	☐Y ☒N ☐DK		
Required to pretreat by the local POTW (federal requirements)?	☐Y ☒N ☐DK		
Permitted under a POTW industrial discharger permit?	☒Y ☐N ☐DK		
Permitted under an NPDES wastewater permit?	☒Y ☐N ☐DK	003-1-B1	City of Klamath Falls permit (not a State permit)
Permitted under an individual storm water permit?	☐Y ☒N ☐DK		
Permitted under a general storm water permit?	☒Y ☐N ☐DK	1200-Z	
Regulated under the Underground Injection Control Program?	☐Y ☒N ☐DK		
Not required to have a permit?	☐Y ☒N ☐DK		
OTHER: Is your facility			
Required to have a Solid Waste Permit?	☐Y ☒N ☐DK		
A TRI reporter?	☐Y ☒N ☐DK		
A State Fire Marshal Hazardous Substance reporter?	☒Y ☐N ☐DK		
A potentially responsible party under the federal Superfund program?	☒Y ☐N ☐DK		All site remediation to "No Further Action"
Participating in Oregon's Voluntary Cleanup program?	☒Y ☐N ☐DK		Currently undergoing State review of ANG action.
Regulated under the Safe Drinking Water Act?	☐Y ☒N ☐DK		
Subject to Underground Storage Tank Regulations?	☐Y ☒N ☐DK		
Regulated under TSCA?	☒Y ☐N ☐DK		
Required to have a SPCC Plan?	☒Y ☐N ☐DK		
Regulated under FIFRA?	☒Y ☐N ☐DK		
Other? _____	☐Y ☐N ☐DK		
Other? _____	☐Y ☐N ☐DK		

8. Implementation status of your Environmental Management System (EMS) (*check the appropriate boxes or provide dates indicating when portion of your EMS was implemented and began functioning*):

☐ Not yet developed

☐ Basic EMS

☒ ISO Comparable EMS

☐ ISO Certified EMS Date Certified: _____

☐ Third Party Certified Certified by: _____

EMS Element	In Development	Functioning Since (date)
Environmental Policy Statement (Attached)		April 2000
Identification of Environmental Aspects and Impacts		October 1990
Setting Objectives and Targets		March 1995
Structure and Responsibility		April 2000
Training		February 1990
External Communications		April 2000
Monitoring and Measurement		November 1991
EMS Audits		July 1991
Management Review		July 1991
Certification		Not Applicable

99999-10. Significant Environmental Impacts/Superior Environmental Performance:

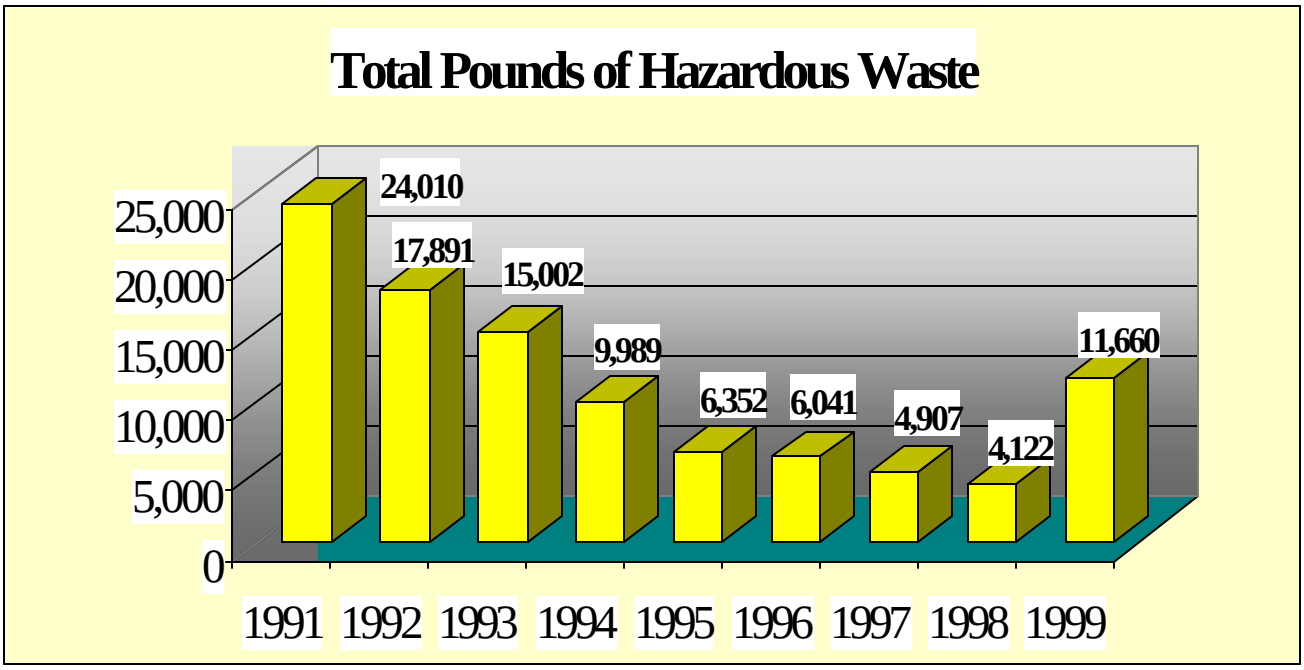
Significant Environmental Impacts	*Regulatory Limit (if any)*	*Performance Measure/ Normalization Factor*	*Current Levels (baseline) 1999*	*Past Performance*	*Future Target/ Objective*
Air Emissions: Due to the 1998 conversion to a dual engine aircraft, Kingsley Field applied for and received an updated air permit to accommodate changes in overall air emissions.					
Air Emissions a. VOC b. NO_x c. CO d. SO_2 e. PM/PM_{10}	a. 15 Tons/Year b. 68 Tons/Year c. 55 Tons/Year d. 1.8 Tons/Year e. 3.6 Tons/Year	Performance Measure: Annual Rate Normalization Factor: Tons/Engine Flying Hour	49.6 Tons Plant Site Emissions/ 4764.2 Engine Flying Hours = .01 Tons Per Engine Flying Hour	1998: 34.52 Tons Plant Site Emissions/ 1737.2 Engine Flying Hours = .02 Tons [1]Per Engine Flying Hour	Increase energy conservation Evaluate reduction options (pollution control devices)
Hazardous Materials Management: Prior to the implementation of the Hazardous Materials Pharmacy, an accurate tracking mechanism for hazardous material usage was not in place. Since its implementation in 1998, the Pharmacy has consolidated inventory and management of all hazardous materials, implemented an automated system dedicated to hazardous materials tracking and management, and improved the "cradle to grave" management concept through increased control of materials					
Hazardous Materials	None	Performance Measure: Annual Rate Normalization Factor: Pounds/Engine Flying Hour	1173 Pounds Hazardous Materials Usage/ 4764.2 Engine Flying Hours = 0.25 Pounds Per Engine Flying Hour	Not Available	Consumption monitoring Implement automated ordering process
Hazardous Waste Management: Hazardous waste generation decreased from 21,000 pounds in 1991 to 4,000 pounds in 1998, despite a concurrent increase from 34 waste profiles to over 350. With the recent conversion to F-15 aircraft hazardous waste totals increased, creating a new baseline.					
Hazardous Waste	None	Performance Measure: Annual Rate Normalization Factor: Pounds/Engine Flying Hour	11,661 Pounds Hazardous Waste/ 4764.2 Engine Flying Hours = 2.45 Pounds Per Engine Flying Hour	1998: 4102 Pounds Hazardous Waste/ 1737.2 Engine Flying Hours = 2.36 Pounds Per Engine Flying Hour	Launderable absorbents Pollution Prevention initiatives Assessment of tri-wall packaging

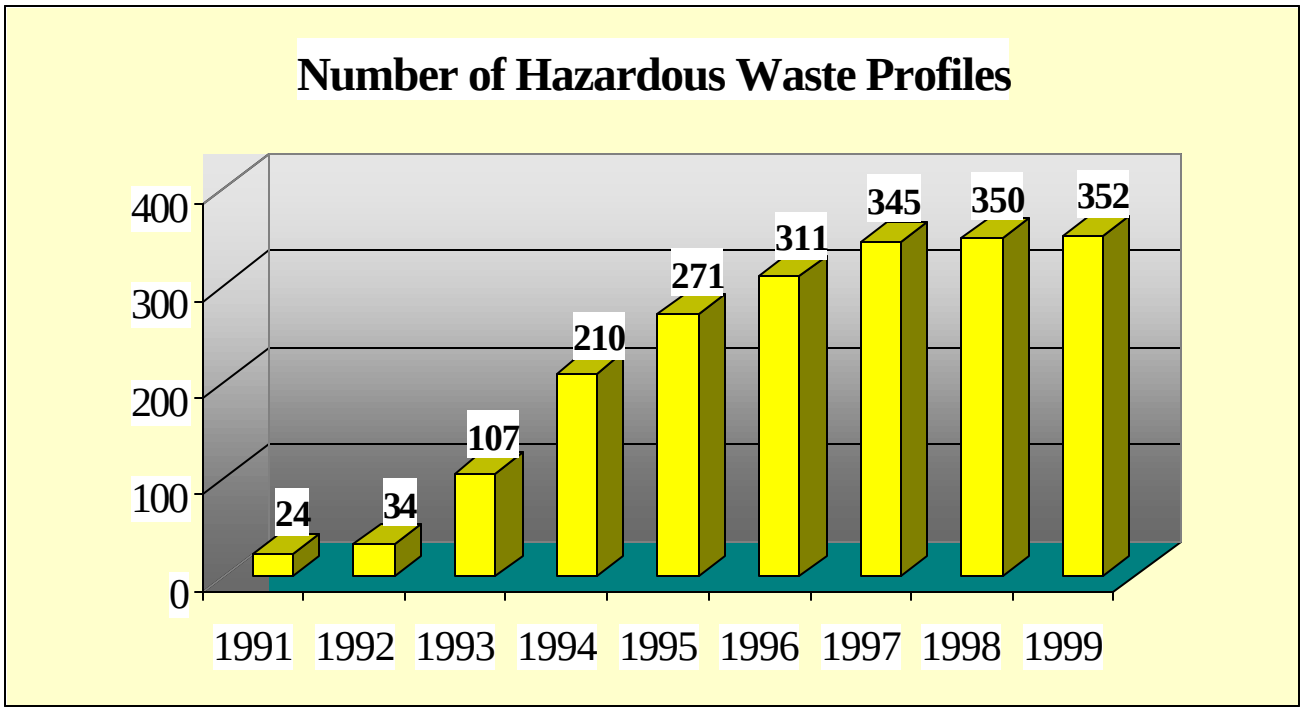
[1] 1998 Engine Flying Hour total includes 183.2 F-16 hours (single-engine) and 777.0 F-15 hours (dual-engine)

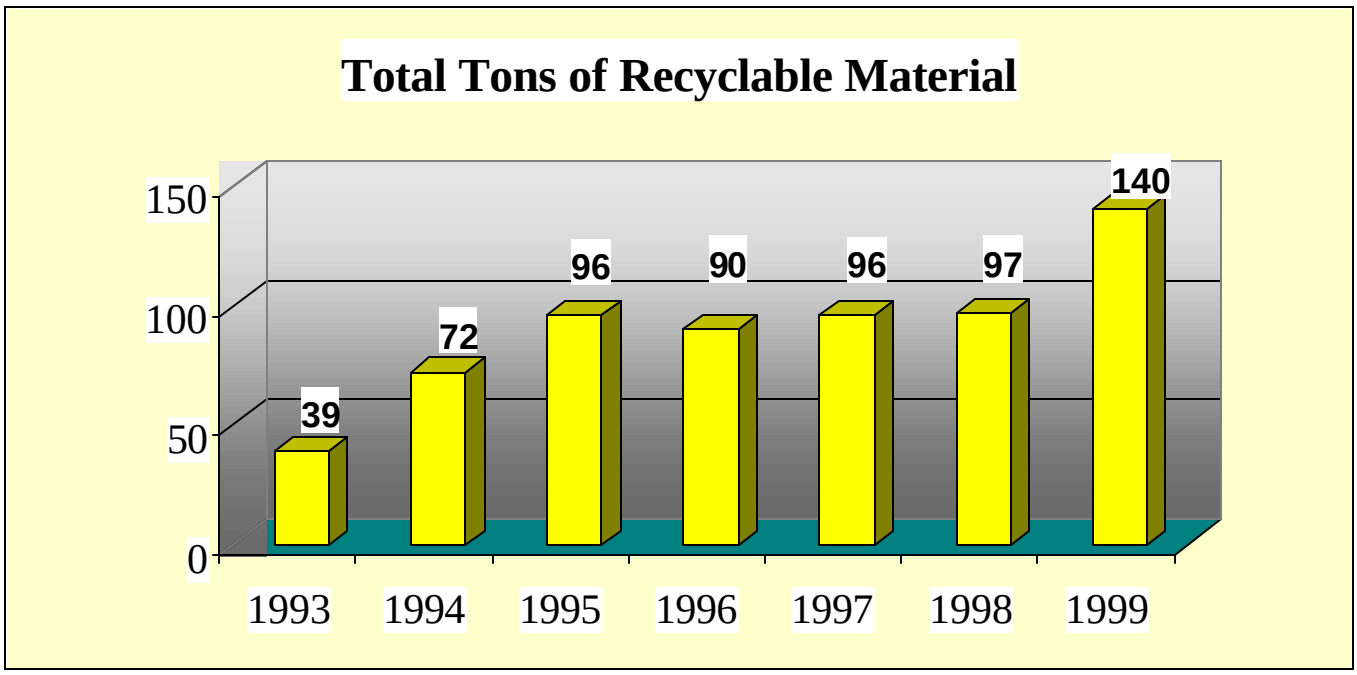
Significant Environmental Impacts	*Regulatory Limit (if any)*	*Performance Measure/ Normalization Factor*	*Current Levels (baseline) 1999*	*Past Performance*	*Future Target/ Objective*
Universal Waste Management: Universal waste includes materials such as light tubes and batteries. These materials, previously considered hazardous waste, are now classified in this waste category with less stringent disposal requirements. Diversion of materials to this category minimizes resources expended for disposal.					
Universal Waste (Light tubes and Batteries)	None	Performance Measure: Annual Rate Normalization Factor: Not Applicable	2348 Pounds Universal Waste	1998: 957 Pounds Universal Waste	Evaluate Green Lights program Maximize diversion of hazardous waste to universal waste Increase awareness through improved education
Non-Regulated Waste Management: Some of Kingsley Field's solid waste streams possessing potentially toxic characteristics fall outside regulatory hazardous waste definitions. In an effort to prevent negative environmental impact, Kingsley Field identifies, captures, and disposes of these wastes as non-regulated waste.					
Non-Regulated Waste	None	Performance Measure: Annual Rate Normalization Factor: Not Applicable	13,949 Pounds Non-Regulated Waste	1998: 4671 Pounds Non-Regulated Waste	Maximize diversion of potentially toxic solid waste to non-regulated waste Increase awareness through improved education
Solid Waste Diversion: Kingsley Field recycling of paper, wood, metal, cardboard, and grass clippings grew from 39 tons in 1991 to over 140 tons in 1999. Recycling of CD-Roms, toner cartridges, tires, and reuse of packaging materials are not yet included in these totals. Historically, performance of the program has been measured in tons of recyclable material generated. In the future, recycling will be measured in terms of solid waste diversion rate.					
Solid Waste Diversion (Paper, Cardboard, Metal, Wood, Grass Clippings)	None	Performance Measure: Annual Rate Normalization Factor: Not Applicable	214,840 Pounds Recycled Material	1998: 166,540 Pounds Recycled Material	Glass/plastic recycling Enhance compost program Improve tracking systems Initiate reuse tracking Increase awareness through improved education

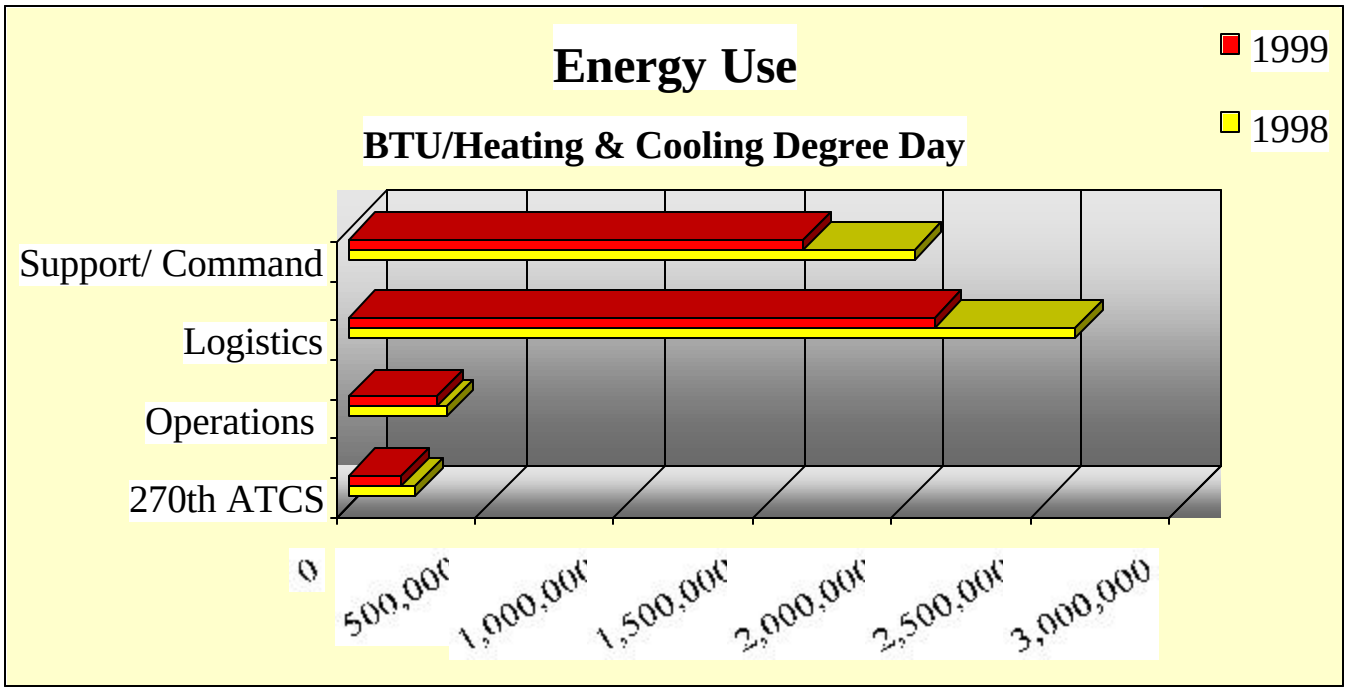
Significant Environmental Impacts	*Regulatory Limit (if any)*	*Performance Measure/ Normalization Factor*	*Current Levels (baseline) 1999*	*Past Performance*	*Future Target/ Objective*
Solid Waste Management (Disposal): In 1999, Kingsley Field began tracking solid waste generation in *mass* as well as volume. Past data in the form of volume reflects Kingsley Field's solid waste reduction efforts. For example, Kingsley Field maintained 161 cubic yards of dumpster volume in 1992. By 1999, volume had been reduced to 36 cubic yards. Measuring solid waste generation in mass provides a more effective method for calculating diversion rates.					
Solid Waste (Disposal)	None	Performance Measure: Annual Rate Normalization Factor: Not Applicable	220,440 Pounds Solid Waste	Not Available	Increase awareness through improved education
Pest Management: The Environmental Management Office (EMO) coordinates with Civil Engineering pesticide application personnel to minimize active ingredients applied. EMO evaluates active ingredients and application methods annually to identify and implement chemical and/or application equipment alternatives.					
Pest Management	None	Performance Measure: Annual Rate Normalization Factor: Pounds/Annual Rainfall	34.11 Pounds/ 11.02" Annual Rainfall = 3.1 Pounds Active Ingredient Per Inch of Rainfall (Pesticide and Herbicide)	1997: 190.22 Pounds/ 14.29" Annual Rainfall = 13.31 Pounds Active Ingredient Per Inch of Rainfall (Pesticide and Herbicide)	Explore Integrated Pest Management (IPM) options Convert to environmentally friendly pesticides and equipment
Used Oil Management: Reclaimed fuel is collected in numerous portable tanks, filtered at the base fuel storage facility, and used in Aerospace Ground Equipment (AGE). Oil is collected in industrial shops, transferred to a tanker truck, and transported to a local contractor for recycling.					
Used Oil a. Reclaimed Fuel b. Recycled POL	None	Performance Measure: Annual Rate Normalization Factor: Not Applicable	a. 6172 Gallons b. 2700 Gallons	1996: a. 2025 Gallons b. 900 Gallons	Maximize reclaimed fuel Increase awareness through improved education

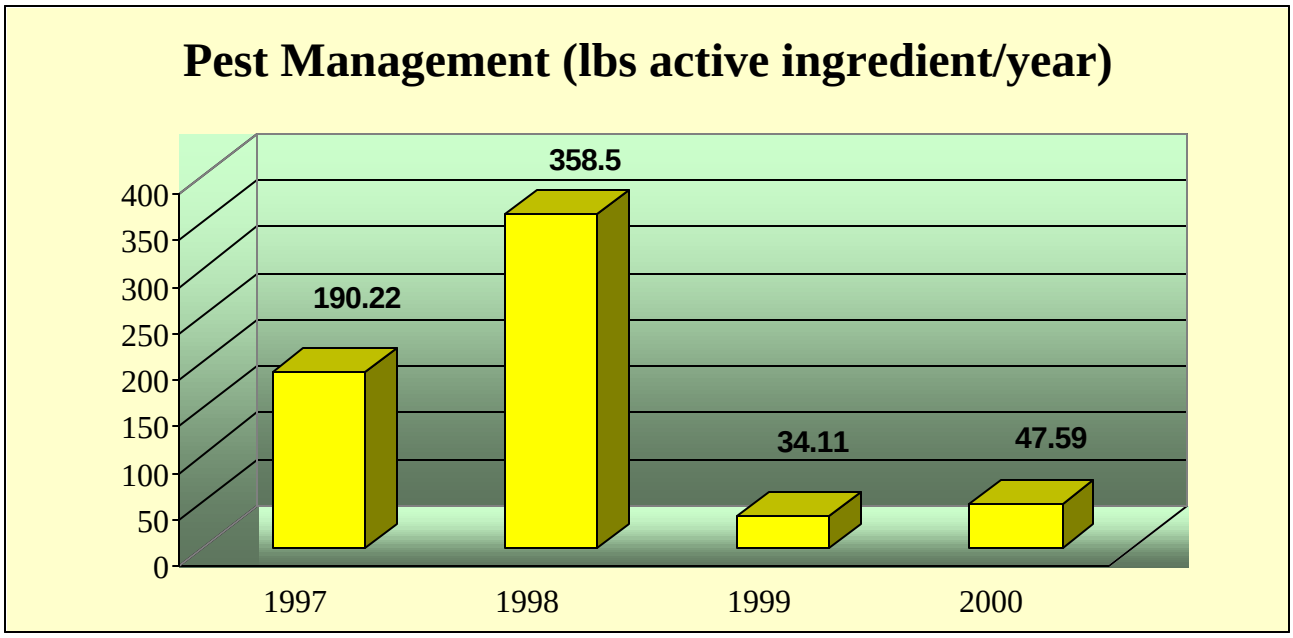
Significant Environmental Impacts	*Regulatory Limit (if any)*	*Performance Measure/ Normalization Factor*	*Current Levels (baseline) 1999*	*Past Performance*	*Future Target/ Objective*
Storm Water Management: Kingsley Field has completed four consecutive sampling events within permit benchmarks and is no longer required to monitor storm water**.** We continue to monitor on an annual basis as part of our proactive environmental program. Kingsley Field is located in an agricultural community. Therefore, in addition to benchmarks outlined in our permit, we also analyze for nitrates, organic carbon, phosphorous, O_2 demand, pesticides, volatiles, and turbidity.					
Storm Water	Defined in Oregon Administrative Rules, Chapter 340, Division 41, Section 485	Performance Measure: Annual Rate Normalization Factor: Not Applicable	Total Compliance	Total Compliance	P2 Initiative to recover deicing fluid from runways Parking lot runoff and aircraft ramp runoff projects Zero discharge of contaminants
Industrial Wastewater Management: Kingsley Field has eliminated seven NPDES sites by installing closed loop systems over the course of seven years, two of which were installed in the last three years.					
Industrial Waste Water a. Oil & Grease b. Copper c. Lead d. Zinc e. Silver f. TTO's	a. 100 mg/l b. 2.07 mg/l c. 1.44 mg/l d. 2.61 mg/l e. 0.35 mg/l f. 2.13 mg/l	Performance Measure: Quarterly Rate Normalization Factor: Not Applicable	Total Compliance	Total Compliance	Eliminate permit requirement by eliminating the four remaining NPDES sites Zero discharge of contaminants
Energy Use: EMO obtains electric and gas utility consumption data from Civil Engineering. All energy units are converted to BTU per heating/cooling degree-day. EMO uses data for reporting and trend analysis.					
Energy Use	None	Performance Measure: Annual Rate Normalization Factor: BTU/Heating & Cooling Degree Day	4,258,060 BTU/*Heating & Cooling Degree Day *One Heating & Cooling Degree Day is a 1 degree F variance in daily average temperature from 70 degrees F	1998: 5,255,623 BTU/*Heating & Cooling Degree Day	Facility design and construction Use of energy conservation technologies Increase awareness through improved education


Total Pounds of Hazardous Waste
25,000
20,000
15,000
10,000
5,000
0
24,010
17,891
15,002
9,989
6,352
6,041
4,907
4,122
11,660
1991
1992
1993
1994
1995
1996
1997
1998
1999


Number of Hazardous Waste Profiles
400
300
200
100
0
24
34
107
210
271
311
345
350
352
1991
1992
1993
1994
1995
1996
1997
1998
1999


Total Tons of Recyclable Material
150
100
50
0
39
72
96
90
96
97
140
1993
1994
1995
1996
1997
1998
1999


Energy Use
BTU/Heating & Cooling Degree Day
1999
1998
Support/ Command
Logistics
Operations
270th ATCS
0
500,000
1,000,000
1,500,000
2,000,000
2,500,000
3,000,000



Other Environmental Programs:

Cultural and Natural Resources: Department of Defense (DoD) protocols mandate cultural and natural resource management as part of any DoD environmental management system. A program assessment for Kingsley Field is programmed for October 2000. The assessment will evaluate present programs and facilitate the development of future objectives.

Environmental Planning: Department of Defense protocols mandate compliance with NEPA and establishes the Environmental Impact Analysis Process (EIAP). EIAP comprehensively evaluates environmental impacts associated with all actions. To enhance the program, we have modified our processes to ensure 100% review of facility maintenance and modification requests.

Toxic Substances Management:

Asbestos Management: In December 1992, the ANG Civil Engineering Technical Services Center Asbestos Management Team conducted an asbestos survey at Kingsley Field. Records and plans for each of 77 buildings were reviewed and inspections conducted. The resulting Management Plan is designed to systematically eliminate asbestos in conjunction with planned facility upgrades and maintenance. We consistently use the team's expertise to ensure asbestos management exceeds compliance.

PCB Management: As part of a recent infrastructure project, all aboveground transformers were removed and Kingsley Field is now a PCB Free installation.

Lead-Based Paint: Air Force policy addresses lead-based paint at Air Force installations and mandates lead-based paint abatement beyond regulatory requirements. Lead-based paint is systematically eliminated in conjunction with planned facility upgrades and maintenance.

P2 Initiatives: Through pollution minimization, Kingsley Field personnel maximize resources available for mission accomplishment. Source reduction is the first choice in managing all aspects of the environmental program. Material substitution, reuse, and recycling are preferred alternatives. Disposal is a last resort. Kingsley Field's pollution prevention policy is implemented through the use of pollution prevention initiatives, evaluating and streamlining processes, improved housekeeping, and increased awareness through extensive training. Specific pollution prevention initiatives include:

- Silver recovery units are used in the two locations where film is processed.
- State of the art Devilbis High Volume, Low Pressure Paint Guns generate negligible overspray and minimize VOC emissions and associated waste.
- Four Compressed Natural Gas (CNG) powered pickup trucks are in use.
- Portable media blaster and vacuum unit collects, filters, and recycles bead blast media.
- Portable sanding/vacuum unit recovers all paint debris.
- All solvent parts washers (seven locations) use a solvent recycler to minimize waste.
- Hazardous Materials (HazMat) Pharmacy serves the entire installation
- Seven closed loop wastewater evaporators eliminates seven NPDES sites.
- Vehicle Maintenance anti-freeze recycling program.
- An absorbent wringer permits reuse of absorbents that were previously disposed of after one use. Absorbents are only disposed of after many uses, when no longer absorbent.
- In-house design and fabrication of secondary containment tailored to meet operational needs.
- Reclaimed jet fuel program enables reuse of fuel and minimizes related waste.
- Used oil collection program facilitates reuse of used oil and minimizes related waste.
- The Base Recycling Center is monitored during hours of collection to ensure maximum separation of recyclable materials.
- Three large aqueous based parts washers eliminate the need to use harmful, waste producing solvents.
- Satellite recycling collection points are convenient and maximize collection.
- A Qualified Recycling Program targets all paper categories, cardboard, oil/fuel, wood, grass clippings, yard debris, and all metals.
- Aerosol can collection program, where cans are punctured, residue is containerized, and the metal is collected for recycling.
- Three automated vinyl printers eliminate requirements for painting and stenciling, thus reducing hazardous material use and the related waste.
- Three wastewater treatment systems ensure contaminant levels are beyond compliance requirements before discharge to the sanitary sewer.
- Mobile product dispensers with incorporated secondary containment provide ease of use with built in spill protection.
- Fixed roof with floating pan and seal installed on main aircraft fuel tank eliminates VOC emissions.
- In accordance with the 173d FW *OIL and HAZARDOUS SUBSTANCES SPILL PREVENTION and RESPONSE PLAN*, operations susceptible to spills have been identified and countermeasures such as spill kits are in place.
- A current Pesticide Management Plan has been implemented.

11. Performance Reporting Plan: Performance measures defined in the previous table will be used for reporting purposes when and where required.

12. Stakeholder Involvement Plan:

Key Stakeholders: The Department of Defense
The United States Air Force
Federal, state and local regulatory agencies
Community leadership
Citizens and community organizations

Activities and Program Elements:

Public Website (http://orklamwww/ems/default.htm)

- Kingsley Field Policy Directive and Operating Instruction
- Audit findings and corrective actions
- Performance indicators and metrics
- Bulletin board for questions and answers
- Calendar of Events

Annual community meetings

- Review annual performance report
- Question and answer sessions

Increased public affairs

- Local media coverage of ANG events
- Press releases

13. Desired incentives or waivers.

- **Technical assistance** is requested to assist the facility to improve its EMS, undertake stakeholder involvement activities, improve its compliance with existing regulations, and improve its system to assure future compliance and improved performance.
- **Single point of agency contact** is requested help the facility communicate with an agency manager on issues relevant to the GEMS Permit.
- **Tailored Enforcement Response** is requested. Kingsley Field requests that DEQ use enforcement discretion in carrying out facility inspections, as specified in DEQ guidance for Green Permits enforcement response. The inspection response would focus on improvements to the environmental management system to achieve and maintain compliance. Kingsley Field requests we be provided time to correct administrative errors and compliance deficiencies. This would include problems discovered through self-reporting or as the result of DEQ site visits. Kingsley Field would use the corrective action process outlined in its EMS to correct deficiencies in a timely manner and in a way that will prevent such deficiencies in the future. Kingsley Field would report on compliance issues and their resolution in our annual Green Permit report.
- **Public recognition as an Environmental Leader** is requested. Specifically, we request:
  - A "Green Permits" display, indicating our participation in the program, posted in front of the facility.
  - A certificate of environmental excellence for public display and distribution.
- **Special services** are requested. Regulatory requirements, such as streamlined reporting, integrated and managed public involvement, and use of EMS Program requirements to fulfill certain regulatory requirements.

- **Regulatory flexibility** is requested. Expedited permit applications review, extended flexible permit conditions, or modification of monitoring and reporting requirements will help the 173 FW conduct business consistent with ISO 14001.

- **Local Recognition Award:** Request presentation of a certificate by a DEQ representative to Kingsley Field's quarterly environmental award recipient.

- **Household Collection Event:** Request a waiver to sponsor annual household collection events for the community. Kingsley Field would act as a temporary collection point (short-term, before the annual collection event) for household materials in the event we cannot host the annual event at our facility.

- **Green Permits Training:** Request annual training for all Green Permits facility employees, to be given by a DEQ representative. Contents of the training will be coordinated with the 173 FW/EMO and the DEQ.

- **Quarterly CCTV broadcast:** Request Question and Answer sessions with the DEQ. Questions will be consolidated and submitted to DEQ before broadcast, allowing time for DEQ to research answers.

- **Awards events:** Request Participation in the DEQ sponsored statewide awards event featuring the Governor and other public sector/private sector leaders.

14. Statement of Certification:

The person at the facility responsible for implementing the environmental management system, i.e., the facility manager, should sign the following statement. He/she should be able to verify the truth, accuracy and completeness of the contents of this application. The name and title of the designated official and the date below may be handwritten or typed. However, the signature must be handwritten and original.

I have reviewed this application and all supporting documentation in their entirety and to the best of my knowledge, information and belief formed after reasonable inquiry, the statements and information contained herein are true, accurate, and complete.

Name of designated responsible official: 1st Lieutenant Joseph R. Harris

Title of responsible official: Environmental Manager

_____ Date: 22 September 2000

Signature of responsible official

ATTACHMENT B: ENVIRONMENTAL MANAGEMENT SYSTEMS

VERIFICATION WORKSHEETS FOR AN ISO 14001 COMPARABLE EMS

Facility and Verifier Data	
Facility: Kingsley Field OR	***Date:***
Verifier:	***Date:***

PURPOSE OF THE WORKSHEETS

- To assist the facility in demonstrating that their EMS is comparable to an ISO 14001 EMS.
- To assist verification that the EMS qualifies for a GEMS Achiever or GEMS Leader Permit.
- To provide a record of verification.

DEFINITION

An ISO 14001 Comparable EMS is functionally equivalent to an ISO 14001 EMS. Each ISO clause has a corresponding element(s) in the facility's EMS that serves the same purpose. The facility's EMS, however, may use different implementation methods.

USE OF WORKSHEETS

1. One **Worksheet** page is used for each ISO 14001 clause.
2. The facility fills in the left-hand column of the first cell of each page by listing the elements of their EMS that are comparable to the ISO clause. They describe the purpose of each element. They also provide and/or reference relevant documentation. (Some documentation may have to be reviewed at the facility site.)
3. The facility fills in the left-hand column of the second cell by describing the methods that their EMS has implemented to achieve the purposes of that element.
4. The Verifier completes the checklist on the **Verification Guidance** page by reviewing the facility information and other documentation and placing a check mark when the item is adequately represented.

NOTE: All check boxes need not be checked for an EMS to be in conformance. In an ISO 14001 certification audit unchecked boxes would be considered "potential non-conformances". However, judgement must be exercised as to what represents a major or a minor non-conformance. Several unchecked boxes for an ISO clause would represent a non-conformance.

5. The Verifier fills in the right-hand column, including an Assessment Code, C, S, or N, based on an overall assessment of all the items of the EMS element.
6. The **Summary Worksheet** is used to compile the results of the verification.

NOTE: Use Basic EMS Verification Worksheets for GEMS Participant Permits.

SUMMARY WORKSHEET FOR AN ISO COMPARABLE EMS

This summary worksheet to be completed by verifier. It compiles results from the individual verification worksheets.

ISO Clause	Is this a Critical Element?	Assessment C/S/N
4.2 Environmental policy	**Y**	
4.3.1 Environmental aspects	**Y**	
4.3.2 Legal and other requirements	**Y**	
4.3.3 Objectives and targets	**Y**	
4.3.4 Environmental management programs	**Y**	
4.4.1 Structure and responsibility		
4.4.2 Training, awareness and competence		
4.4.3 Communication	**Y**	
4.4.4 EMS documentation		
4.4.5 Document control		
4.4.6 Operational control		
4.4.7 Emergency preparedness & Response		
4.5.1 Monitoring and measurement		
4.5.2 Nonconformance and corrective and preventive action		
4.5.3 Records		
4.5.4 Environmental management system audit	**Y**	
4.6 Management review	**Y**	

TOTAL COUNT:	**C**	**S**	**N**

ARE ANY CRITICAL ELEMENTS NON-CONFORMANT (Y/N)?	

4.2 Environmental policy

Purpose of ISO Clause (in ISO's Words):
To state intentions and principles in relation to overall environmental performance.
To provide a framework for action and for setting environmental objectives and targets.
Clarification of Purpose:
Statement of management's intent for the EMS, clarifies values. Says "How good do we intend to be?" Sets direction for development of EMS. Sets expectations of stakeholders. Guides employees in absence of other explicit direction.
Methods Specified by the ISO Clause:
Top management shall define the organization's environmental policy and ensure that it:
a. Is appropriate to the nature, scale and environmental impacts of its activities, products and services;
b. Includes a **commitment** to continual improvement and **prevention of pollution**;**
c. Includes a **commitment to comply with relevant environmental legislation and regulations**, and with other requirements to which the organization subscribes;
d. Provides the framework for setting and reviewing environmental objectives and targets;
e. Is documented, implemented and maintained and communicated to all employees;
f. Is **available to the public**.
** GEMS adheres to the pollution prevention hierarchy and EMSs shall be evaluated in terms of the USEPA definition of pollution prevention (see OAR 340-014-0105).

This Column to be Filled in by Facility	This Column for Verifier Notes
ELEMENTS: List elements of your EMS that achieve the same purpose as this ISO clause. Reference documentation.	
- The tenets of Kingsley Field's Environmental Management System (EMS) are prevention of pollution, continuous improvement, environmental sustainability, going beyond mere compliance with all governing regulations, commitment to public interaction, and the cleanup of any existing environmental damage. - Kingsley Field has developed an installation EMS corporate policy appropriate to its impacts on the environment, including a commitment to continual improvement and pollution prevention. This policy is contained in Kingsley Field Policy Directive (KFPD) 32-70, *Environmental Management System (EMS)* (Tab 1). - The policy will be distributed to base personnel, contractors on base, and the local community.	
IMPLEMENTATION: Describe the methods that are implemented to achieve the purpose of this clause.	
- The Base Commander has signed KFPD 32-70, thus declaring it the official EMS policy for the installation. - The installation Environmental Management Office (EMO) has distributed Kingsley Field Instruction (KFI) 32-7001 to all base personnel and contractors on base, and has made the policy available to the local community via a public website and annual community meetings. - The installation's Environmental Protection Committee (EPC) reviews KFI 32-7001 annually to ensure it remains appropriate for the installation's environmental impacts. -	
Assessment Codes: C = Comparable or In Conformance; S = Sufficiently Comparable (Minor non-conformances may exist); N = Not Comparable or Not In Conformance	*Verifier Assessment Code:*

4.2 Environmental policy

VERIFICATION GUIDANCE

GEMS PERMIT GUIDELINES

GEMS ACHIEVER (Tier II): The environmental policy should embody:

☐ Achieving and maintaining compliance with regulatory requirements

☐ Applying the pollution prevention definition and hierarchy when setting goals and targets and implementing environmental impacts

1. Source Reduction (highest priority)
2. Recycling
3. Treatment
4. Disposal

☐ Excelling in performance relative to all regulated pollutants and activities.

☐ A strong commitment to achieving superior performance relative to all site-based environmental aspects that are determined to have significant impacts, including both regulated and unregulated environmental impacts.

GEMS LEADER (TIER III): In addition to the provisions in Tier II, the environmental policy should embody a strong commitment to:

☐ Providing environmental leadership for their industry and/or the community

☐ Addressing life cycle and/or sustainability impacts of their activities, products and services.

PURPOSE

Statement of management's intent for the EMS, clarifies values. Says "How good do we intend to be?" Sets direction for development of EMS. Sets expectations of stakeholders. Guides employees in absence of other explicit direction.

IMPACT OF ABSENCE

- Purpose and intent of EMS is unclear resulting in an EMS that isn't aligned with management's intentions.
- No evidence of management standing behind environmental policies causes cynicism, both internally and externally.
- Stakeholders' expectations not set, causes misunderstandings and mistrust.

•

4.3.1 Environmental aspects

Purpose of ISO Clause (in ISO's Words):
To identify the elements of an organization's activities, products or services that can interact with the environment.
Clarification of the Purpose:
Base actions and decisions on how to spend limited resources on thorough understanding of environmental impact. Ensures consideration of who are the stakeholders and what do they think is important, and what decisions do we make that have an environmental impact. Also should result in a recognition that activities, products, and services have many environmental impacts beyond those that are regulated.
Methods Specified by the ISO Clause:
The organization shall:
a. Establish and maintain procedure(s) to **identify the environmental aspects** of its activities, products and services that it can control and over which it can be expected to have an influence,
b. **Determine those that have or can have significant impacts on the environment**.
c. Ensure that the aspects related to these significant impacts are considered in setting its environmental objectives.
d. Keep this information up-to-date.

This Column to be Filled in by Facility	This Column for Verifier Notes
ELEMENTS: List elements of your EMS that achieve the same purpose as this ISO clause. Reference documentation.	
- Kingsley Field has identified their environmental aspects as required by various federal regulations and Air Force Instructions (AFI). - Kingsley Field participates in the Air Force's Hazardous Materials Management Program (HMMP), defined in AFI 32-7086, *Hazardous Materials Management*, which examines the environmental aspects of new/existing weapon systems over their life cycle and identifies pollution prevention solutions to minimize those aspects. - Kingsley Field adheres to sustainable development principles in its contracting, construction, and purchasing as required by Department of Defense (DoD) and Air Force policy letters and guidance documents, and by the *Federal Acquisition Requirements*. - The impacts of aspects are identified and minimized through application of pollution prevention concepts. A brief history and list of P2 initiatives is contained in Attachment A (Tab 3).	
IMPLEMENTATION: Describe the methods that are implemented to achieve the purpose of this clause.	
- Kingsley Field uses AFI 32-7061, *Environmental Impact Analysis Process (EIAP)*, to accomplish National Environmental Policy Act (NEPA) required assessments of potential environmental impacts from its actions. - The EMO conducts environmental audits, annually, at a minimum, on each industrial activity on the installation in accordance with KFI 32-7001. Aspect identification and review is a major portion of these audits. - Kingsley Field uses AFI 32-7063, *Air Installation Compatible Use Zone Program*, to determine possible aspects related to environmental noise. - Kingsley Field will be refining many of their environmental aspects via the Compliance Through Pollution Prevention (CTP2) Program in Fall 2000. - AFI 32- 7080, *Compliance Assurance and Pollution Prevention*, will require Kingsley Field to conduct pollution prevention opportunities assessments on four percent of their compliance sites annually. Compliance site locations are locations or instances where there is the potential to be out of compliance with Federal regulations. - The EPC, Kingsley Field's senior environmental leadership reviews, at least annually, all environmental aspects and programs affecting the installation's' aspects in accordance with AFI 32-7005, *Environmental Protection Committees*, and KFI 32-7001.	
Assessment Codes: C = Comparable or In Conformance; S = Sufficiently Comparable (Minor non-conformances may exist); N = Not Comparable or Not In Conformance	*Verifier Assessment Code:*

4.3.1 Environmental aspects

VERIFICATION GUIDANCE

GEMS PERMIT GUIDELINES

GEMS ACHIEVER (TIER II): The aspect/impact analysis should include:

- ☐ A thorough examination of regulated and unregulated site-based environmental impacts.
- ☐ A determination of which site-based aspects have a significant impact on the environment, taking into consideration local, regional and global environmental conditions.
- ☐ A consideration of stakeholder input in identifying and determining the significance of environmental impacts.
- ☐ The analysis of aspects should address the operational provisions of the regulation or permit (e.g. training, maintenance, etc.).
- ☐ A provision for reexamining this analysis and keeping it up-to-date based on new understandings about environmental conditions or impacts.

GEMS LEADER (TIER III): In addition to the provisions in Tier II the aspects/impacts analysis would include some of the following elements:

- ☐ An examination of all environmental impacts of activities, products and services throughout their life cycle.
- ☐ Some form of life cycle analysis, either quantitative or qualitative, that addresses all life cycle stages including resource extraction, pre-manufacturing processing and transportation, manufacturing, distribution, packaging, use, and disposal/recycling.
- ☐ An analysis of activities, products and services that do or may potentially impact future environmental sustainability
- ☐ An examination of the literature on sustainability for definitions and concepts and to identify activities, products and services that are perceived to have sustainability impacts.
- ☐ A determination of which life-cycle or sustainability impacts are most significant for the environment, taking into consideration local, regional and global conditions.
- ☐ A provision for reexamining this analysis and keeping it up-to-date, including incorporating new scientific and management knowledge about environmental conditions and impacts.
- ☐ A requirement that suppliers provide information on environmental performance (optional: requires adoption of a formal environmental management system).

PURPOSE

Base our actions and decisions on a thorough understanding of environmental impact. Forces consideration of who are our stakeholders and what do they think is important, and what decisions do we make that have an environmental impact. Also forces recognition that our activities, products, and services have MANY environmental impacts other than those that are regulated.

IMPACT OF ABSENCE

- Fixing unimportant or convenient problems while higher impact issues go unaddressed.
- Too narrow a consideration of environmental issues.

4.3.2 Legal and other requirements

Purpose of ISO Clause (in ISO's Words):
To identify and have access to legal and other requirements that are applicable to its environmental aspects

Clarification of Purpose:
Ensures that the EMS recognizes legal responsibilities and is a tool to fulfill them. Ensures that the EMS explicitly recognizes other commitments, such as environmental initiatives of a parent company, (such as Responsible Care).

Methods Specified by the ISO Clause:
The organization shall:

a. Establish and maintain a procedure to identify legal and other requirements

b. Establish and maintain a procedure to have access to legal and other requirements

This Column to be Filled in by Facility	This Column for Verifier Notes
ELEMENTS: List elements of your EMS that achieve the same purpose as this ISO clause. Reference documentation.	
- The EMO and the Staff Judge Advocate are responsible for reviewing and maintaining currency with the environmental regulations affecting Kingsley Field. - The EMO is responsible for communicating legal and other requirements to all base personnel and contractors through policy letters, newsletters, management plans, EPC meetings, formal regulations, operating instructions, and training. - The Environmental Assessment and Management (TEAM) Guide environmental protocols are updated on a quarterly basis. The TEAM Guide encompasses all environmentally related Federal and DoD requirements. The Air Force Supplement to the TEAM Guide is updated on a quarterly basis and addresses all environmentally related Air Force-specific instructions, policies, and guidance. The State supplement to the TEAM guide is updated annually and is comprised of protocols reflecting all applicable state environmental regulations. - DoD directives and instructions are incorporated into Air Force directives and instructions. Adherence to Air Force publications is required for all Air Force installations.	
IMPLEMENTATION: Describe the methods that are implemented to achieve the purpose of this clause.	
- Procedures for the review and maintenance of "Legal and Other Requirements" are outlined in Section 3 of KFI 32-7001 (Tab 2).	

Assessment Codes: C = Comparable or In Conformance; S = Sufficiently Comparable (Minor non-conformances may exist); N = Not Comparable or Not In Conformance	*Verifier Assessment Code:*	

4.3.2 Legal and other requirements

VERIFICATION GUIDANCE

GEMS PERMIT GUIDELINES

GEMS ACHIEVER AND GEMS LEADER (ALL TIERS): In order to adequately assure compliance with legal and other requirements, check that GEMS Achiever and GEMS Leader facilities have:

- ☐ A procedure to identify all applicable federal, state and local legal requirements, including all permit conditions, and to keep the information updated.
- ☐ A record of any other requirements that the facility, or the parent company, have committed to that apply to the facility, including voluntary industry codes of practice, contracts, customer commitments, or internal requirements.
- ☐ A record of GEMS Permit guidelines and requirements that the facility, or the parent company, have committed to that apply to the facility.
- ☐ Accessibility to the terms and conditions of these legal and other requirements.
- ☐ A process for keeping this information up to date including periodic review, update and communication as appropriate.

PURPOSE

Ensure that the EMS recognizes legal responsibilities and is a tool to fulfill them. Also ensures that the EMS explicitly recognizes other commitments, such as environmental initiatives of a parent company.

IMPACT OF ABSENCE

- An EMS that does not help a company maintain compliance.
- Schism between the EMS and the REALLY important stuff.
- Poor compliance.

4.3.3 Objectives and targets

Purpose of ISO Clause (in ISO's Words):
To set an overall environmental goal for the organization to achieve
To set a detailed performance requirement that needs to be met in order to achieve the objectives.

Clarification of Purpose
Focuses activities on consistent performance goals. Grounds activities in a basis of fact. Distills all the above into "what are we going to do?" Sets up Environmental Performance Evaluation. Ensures that views of interested parties and business realities are considered.

Methods Specified by the ISO Clause:
The organization shall:

a. Establish and maintain documented environmental objectives and targets at each relevant function and level within the organization
b. Consider the legal and other requirements
c. Consider its significant environmental impacts
d. Consider its technological options and financial, operational and business requirements
e. Consider the views of interested parties
f. Establish objectives and targets consistent with environmental policy, including commitment to pollution prevention.

This Column to be Filled in by Facility	This Column for Verifier Notes
ELEMENTS: List elements of your EMS that achieve the same purpose as this ISO clause. Reference documentation.	
- Top-level government and Air Force officials are one source of Air Force-wide objectives and targets. Executive Orders (EO), Department of Defense Instructions and Directives (DoDI & DoDD respectively), and Air Force Instructions (AFI) establish these objectives and goals. - EO 13148, *Greening the Government Through Leadership in Environmental Management*, 21 April 2000, has set new federal facility objectives and targets. The goals set forth in the EO are to further reduce release and use of toxic chemicals and hazardous substances. - DoD tracks "Measures of Merit" with set objectives and targets in areas such as toxic releases, non-hazardous waste disposal, non-hazardous waste recycling, hazardous waste disposal, and pesticide usage. - Kingsley Field also establishes its own objectives and targets, which meet or exceed those established by higher headquarters. These specific objectives and targets seek to reduce the risks of its environmental aspects to as near zero as feasible based on a commitment to continual improvement and pollution prevention. - A brief history and list of Kingsley Field's pollution prevention initiatives is contained in Attachment A (Tab 3).	
IMPLEMENTATION: Describe the methods that are implemented to achieve the purpose of this clause.	
- Kingsley Field tracks hazardous material usage, recyclable material usage, and other measurable quantities to evaluate its progress towards stated objectives and targets. Measurable quantities are provided to higher headquarters to establish Air Force-wide compliance with set objectives and targets. - A hazardous materials pharmacy (HAZMAT) program is established to approve and track the usage of hazardous materials. To control hazardous material use, HAZMAT practices include material labeling, management of product shelf life, and purchase of materials only in quantities required for the mission. - The EPC continually evaluates the installation's performance against stated objectives and targets, making changes as necessary to incorporate new developments and new or modified activities, procedures, or services in accordance with KFI 32-7001.	

4.3.3 Objectives and targets (continued)		
- Kingsley Field intends to disseminate this information and obtain input from an annual community meeting and feedback from a public website. - All complaints and suggestions from the surrounding community are considered in the establishment of objectives and targets.		
Assessment Codes: C = Comparable or In Conformance; S = Sufficiently Comparable (Minor non-conformances may exist); N = Not Comparable or Not In Conformance	*Verifier Assessment Code:*	

4.3.3 Objectives and targets

VERIFICATION GUIDANCE

GEMS PERMIT EMS GUIDELINES

ALLGEMS PERMITS: The following elements are required for both GEMS Achiever and GEMS Leader facilities:

☐ A procedure for establishing Objectives and Targets for the different functions and levels of the organization.

☐ Documentation of the objectives and targets.

☐ Objectives and targets that are consistent with the environmental policy.

☐ Objectives and targets that have considered the views of interested parties.

☐ Objectives that address:

- ☐ Significant environmental aspects
- ☐ Legal and other requirements
- ☐ Technological, financial, operational and business requirements
- ☐ Targets that are quantified where possible

☐ Targets that provide detailed performance requirements to achieve the objectives.

☐ A procedure to update the Objectives and Targets based on audits and management review.

TIER II: GEMS Achiever Permit facilities should define:

☐ Objectives and targets that, if achieved, will assure that the facility achieves superior environmental performance for site-based aspects that have significant impacts, including both regulated and unregulated impacts. For example:

☐ Energy conservation	☐ Water conservation	☐ Material use conservation
☐ Toxic use reduction	☐ Carbon emissions	☐ Hazardous waste reduction
☐ Solid waste reduction	☐ Reuse & recycling	☐ Employee commuting
☐ Land use	☐ Habitat conservation	☐ Landscape management
☐ _____	☐ _____	☐ _____

TIER III: GEMS Leader Permit facilities should define:

☐ Objectives and targets that, if achieved, will assure that the facility provides industry leadership in applying sustainability principles to activities, products and services.

☐ Life cycle assessment	☐ Supply chain management	☐ Product life extension
☐ Design for environment	☐ End of life product mgmt.	☐ Environmental labeling
☐ Industry mentoring	☐ Industry codes & BMP	☐ Habitat restoration
☐ _____	☐ _____	☐ _____

PURPOSE

Focuses activities on consistent performance goals. Grounds activities in a basis of fact. Distills all the above into "what are we going to do?" Ensures that views of interested parties are considered.

IMPACT OF ABSENCE

- EMS degenerates into series of anecdotes about "wins".
- No long-term focus on improving performance.
- No way to show improved performance.

4.3.4 Environmental management program(s)

Purpose of ISO Clause (in ISO's Words):
To achieve the organization's objectives and targets
Clarification of Purpose:
Translates an understanding about the facility (where we are, what is expected, and where we want to be) into action plans – "How are we going to get there?" Should result in consideration of who has what role in improving performance and what resources are needed.
Methods Specified by the ISO Clause:
The organization shall:
a. Establish and maintain program(s) for achieving objectives and targets
b. Include designation of responsibility for achieving objectives and targets
c. Include means and time-frame by which they are to be achieved
d. For new developments and new or modified activities, products or services, the program(s) shall be amended where relevant

This Column to be Filled in by Facility	This Column for Verifier Notes
ELEMENTS: List elements of your EMS that achieve the same purpose as this ISO clause. Reference documentation.	
- EOs, DoDIs, DoDs, AFIs, and applicable higher headquarters policy letters and guidance documents establish a baseline EMS common to all Air Force installations. These documents are crafted to incorporate full compliance with all applicable environmental laws and statutes. A listing of these documents is located in KFI 32-7001, Attachment 1 (Tab 2). - KFI 32-7001, *Environmental Management System*, encompasses these documents in establishing a Kingsley Field unique EMS aligned along the specific tenets of KFPD 32-70 and ISO 14001.	
IMPLEMENTATION: Describe the methods that are implemented to achieve the purpose of this clause.	
- Kingsley Field is required to comply with the EMS related documents discussed above. - KFI 32-7001 is the implementation guidance for the installation's EMS and contains, either directly or through reference, all procedures necessary to implement an ISO 14001 compliant EMS.	

Assessment Codes: C = Comparable or In Conformance; S = Sufficiently Comparable (Minor non-conformances may exist); N = Not Comparable or Not In Conformance	*Verifier Assessment Code:*	

4.3.4 Environmental management program(s)

VERIFICATION GUIDANCE

GEMS PERMIT EMS GUIDELINES

ALLGEMS PERMITS: The following elements should be present for both GEMS Achiever and GEMS Leader facilities:

- ☐ Programs that are consistent with the objectives and targets and the facility's GEMS Permit.
- ☐ Assignment of responsibility for achieving objectives and targets at each function and level of the facility.
- ☐ A means for achieving the objectives and targets, including methods and resources.
- ☐ A designated time frame.
- ☐ A procedure for modifying the program based on:
  - ☐ Audits of progress toward targets.
  - ☐ New developments or new or modified activities, products or services.
- ☐ A procedure for monitoring progress toward the objectives and targets
- ☐ Pollution prevention initiatives as a preference to pollution control activities.

PURPOSE

Translates an understanding about where we are, what is expected of us, and where we want to be into actionable plans – "How are we going to get there?". Forces consideration of who has what role in improving performance and what resources are needed.

IMPACT OF ABSENCE

- Unattainable goals set for PR value.
- No accountability for achieving goals.
- Goals established but no real way to achieve them.
- Insufficient resources to achieve goals.

4.4.1 Structure and responsibility

Purpose of ISO Clause (in ISO's Words):
To facilitate effective environmental management through assignment of roles, responsibilities and provision of resources.
Clarification of Purpose:
Makes it clear who is responsible for what, and that adequate resources will be provided.
Methods Specified by the ISO Clause:
The organization shall:
a. Define roles, responsibilities and authorities and document and communicate to the organization's employees
b. Management shall provide resources essential to the implementation and control of the EMS, including human resources, specialized skills, technology, and finances
c. Top management shall appoint a specific management representative who assures that the EMS is established, implemented and maintained and reports to top management on performance of EMS and needed improvements.

This Column to be Filled in by Facility	This Column for Verifier Notes
ELEMENTS: List elements of your EMS that achieve the same purpose as this ISO clause. Reference documentation.	
- The EMS is managed via the EPC in accordance with AFI 32-7005. The 173d Fighter Wing Commander chairs the EPC. - The day-to-day administration of the EMS is the responsibility of the EMO. In addition, each industrial shop has a Shop Environmental Manager (SEM), appointed by the shop supervisor, that is responsible for management of the environmental aspects and program elements within their area of responsibility.	
IMPLEMENTATION: Describe the methods that are implemented to achieve the purpose of this clause.	
- The EPC meets on a quarterly basis to discuss and review the aspects of the EMS in accordance with KFI 32-7001. - The EMO manages the Kingsley Field EMS in accordance with higher headquarters directed guidance and KFI 32-7001. - SEMs have been appointed in writing for each of the industrial shops. Their responsibilities are outlined in KFI 32-7001.	
Assessment Codes: C = Comparable or In Conformance; S = Sufficiently Comparable (Minor non-conformances may exist); N = Not Comparable or Not In Conformance	*Verifier Assessment Code:*

4.4.1 Structure and responsibility

VERIFICATION GUIDANCE

GEMS PERMIT EMS GUIDELINES

ALL GEMS PERMITS: The following elements should be present for both GEMS Achiever and GEMS Leader facilities:

- ☐ Clearly defined roles, responsibilities, and authorities.
- ☐ Roles, responsibilities, and authorities have been communicated throughout the organization.
- ☐ Human, financial and technological resources essential to the implementation and control of the EMS have been provided.
- ☐ A management representative has been appointed who is responsible for implementation and maintenance of the EMS.
- ☐ A management representative has been appointed who is responsible for reporting to top management.

PURPOSE

Makes it clear who is responsible for what, and that adequate resources are available.

IMPACT OF ABSENCE

- No accountability for EMS activities.
- The Environmental Professional is responsible for anything that has anything to do with the environment but has no true authority or resources. They carry a big club called "fines and jail" but other than invoking that club they are ignored.

4.4.2 Training, awareness and competence

Purpose of ISO Clause (in ISO's Words):
To ensure the capability of personnel, especially those carrying out specialized environmental management functions.

Clarification of Purpose:
Ensure that people have the necessary training and background to fill their roles in the EMS successfully, whether they are the President, an Environmental Professional, a Production Worker, or a Janitor.

Methods Specified by the ISO Clause:
The organization shall:

a. Identify training needs
b. Require that all personnel whose work may create a significant impact upon the environment to receive appropriate training
c. Establish and maintain procedures to make its employees or members at each relevant function and level aware of:
   – the importance of conformance with policy and procedures and requirements of the EMS
   – the significance of environmental impacts of their work activities and benefits of improved personal performance
   – their roles and responsibilities in the EMS
   – the potential consequences of departure from specified operating procedures
d. Personnel performing tasks that can cause significant impacts shall be competent on the basis of education, training and/or experience

This Column to be Filled in by Facility	This Column for Verifier Notes
ELEMENTS: List elements of your EMS that achieve the same purpose as this ISO clause. Reference documentation.	
- Most environmental training requirements are outlined in Federal, state, DoD, Air Force, or Kingsley Field instructions. Additional training requirements are identified both organizationally and individually in conjunction with the installation's annual environmental audit program. - All base personnel receive training on the hazards of their work place, which includes information on hazardous materials and emergency response, when required. Shop SEMS or supervisors conduct training for new personnel within one month of assuming duties. - Contractors performing work on the installation, which will require them to have specific environmental training, will have the requirement for this training written into their contract. - Formal training for areas such as hazardous waste management will be conducted as required by 40 CFRs.	
IMPLEMENTATION: Describe the methods that are implemented to achieve the purpose of this clause.	
- EMO works with each base organization to identify specific training requirements. - EMO develops training plans for each employee to ensure employees maintain competency (as required by regulation and/or responsibility) within the program area. Trainee supervisors maintain training plans. - Under EMO guidance, SEMs and supervisory staff identify personnel whose positions require they receive specific environmental training. Training is then accomplished through appropriate means. - In most cases it will be the contractor's responsibility to obtain required training; however, EMO will provide training to contractors when required.	
Assessment Codes: C = Comparable or In Conformance; S = Sufficiently Comparable (Minor non-conformances may exist); N = Not Comparable or Not In Conformance	*Verifier Assessment Code:*

4.4.2 Training, awareness and competence

VERIFICATION GUIDANCE

GEMS PERMIT EMS GUIDELINES

ALL GEMS PERMITS: The following elements should be present for both GEMS Achiever and GEMS Leader facilities:

- ☐ A determination of what job function may have a significant environmental impact.
- ☐ An identification and evaluation of training needs for all employees whose job functions may have a significant environmental impact, and delivery of appropriate training.
- ☐ An identification and evaluation of training needs for all contractors whose duties may have a significant environmental impact, and delivery of appropriate training.
- ☐ General awareness training for all employees and managers that addresses the environmental policy and the organizations environmental impacts.
- ☐ Training and awareness activities for all employees that address the types of environmental impacts appropriate to the facility's Tier.
- ☐ Periodic refresher training.
- ☐ A method of determining that employees have the appropriate education, training and experience to perform tasks for which they are responsible which can cause significant environmental impact.

PURPOSE

Ensure that people have the necessary training and background to fill their roles in the EMS successfully, whether they are the President, the Environmental Professional, a Production Worker, or the Janitor.

IMPACT OF ABSENCE

- Unqualified people. Leads to poor execution and potentially to environmental emergencies.
- Repeated dissatisfaction about people's performance. No one succeeds. Assumption becomes that the people are dumb, or lazy, or don't care.

4.4.3 Communication

Purpose of ISO Clause (in ISO's Words):
To ensure effective internal and external communication regarding its environmental aspects and EMS
Clarification of Purpose:
Ensures broad internal communications, and that communications from external stakeholders are recognized and responded to. Also ensures that an explicit, consistent policy regarding external communications is followed.
Methods Specified by the ISO Clause:
Organization shall establish and maintain procedures for:
a. Internal communication between the various levels and functions of the organization
b. Receiving, documenting and responding to relevant communication from external interested parties
c. Consider processes for external communication on significant environmental aspects and record decisions.

This Column to be Filled in by Facility	This Column for Verifier Notes
ELEMENTS: List elements of your EMS that achieve the same purpose as this ISO clause. Reference documentation.	
- EMO is the primary authority for communicating official and documented information to interested parties both within and outside of Kingsley Field. - EMO has established procedures for disseminating environmentally related information across the installation as defined in Section 7 of KFI 32-7001. - Kingsley Field makes the results of NEPA required and AICUZ assessments available to the local community in accordance with Section 7 of KFI 32-7001. - Kingsley Field conducts an annual meeting with the community. This meeting promotes community involvement in environmental issues and relays vital information regarding the installation's environmental aspects. - Kingsley Field maintains a public website to disseminate pertinent information to the community.	
IMPLEMENTATION: Describe the methods that are implemented to achieve the purpose of this clause.	
- Communication from regulatory agencies is primarily directed to the EMO who in turn conveys the information to the applicable SEM and shop supervisor. - Certain communications are fielded by or coordinated with Kingsley Field's Public Affairs Office, the Judge Advocate, and/or the Installation Commander at the direction of the Installation Commander. - Annual public meeting topics include a review of aspect identification methods, identified aspects and their management, annual audit findings, corrective actions, and EMS objectives and achievements. - Kingsley Field's public website provides EMS policy, history, operating information, audit and meeting reports, and provides an avenue for public interaction and discussion with EMS personnel.	
Assessment Codes: C = Comparable or In Conformance; S = Sufficiently Comparable (Minor non-conformances may exist); N = Not Comparable or Not In Conformance	*Verifier Assessment Code:*

4.4.3 Communication

VERIFICATION GUIDANCE

GEMS PERMIT EMS GUIDELINES

ALL GEMS PERMITS: The following elements should be present for both GEMS Achiever and GEMS Leader Permit facilities:

Internal Communication:

- ☐ A procedure for internal communications between various functions and levels of the organization related to the EMS and environmental aspects.
- ☐ An assignment of responsibility for reviewing, updating and overseeing implementation of the internal communication procedure.
- ☐ Examples of communications that have occurred between functions and levels of the organization.

External Communication:

- ☐ A procedure for providing two-way dialogue regarding environmental performance that proactively encourages public inquiries and comments.
- ☐ Mechanisms to discuss environmental policy, annual performance report, environmental aspects and significant impacts, and establishing objectives and targets with stakeholders.
- ☐ A mechanism for receiving, documenting, considering and responding to communications received from stakeholders.
- ☐ Examples of external communications that have been received, documented, considered and responded to.

GEMS LEADER PERMITS: The external communication program for a GEMS Leader Permit facility should, in addition to the above, include:

- ☐ A procedure to communicate with appropriate stakeholders regarding impacts that may occur beyond the site, e.g. life cycle impacts of products or services.
- ☐ Procedures to establish and maintain understanding, constructive dialogue and partnership with significant stakeholders.

Reporting:

- ☐ A procedure for reporting environmental performance annually to DEQ in satisfaction of GEMS reporting guidelines.
- ☐ (OPTIONAL BUT RECOMMENDED) A procedure to prepare an annual Environmental Performance Report for distribution to stakeholders.

PURPOSE

Ensure free internal communications, and that communications from external stakeholders are recognized and responded to. Also ensures that an explicit, consistent policy regarding external communications is followed.

IMPACT OF ABSENCE

- Poor internal communication. Right hand doesn't know what left is doing. People don't know who to ask if they have questions or concerns.
- Frustrated stakeholders because their attempts at communication are not dealt with effectively.
- Views of interested parties not considered when setting O&T. (Note that 4.3.3 says that views of interested parties must be considered when setting O&T. It is difficult to consider this input if we don't know we have any.)

4.4.4 Environmental management system documentation

Purpose of ISO Clause (in ISO's Words):
To describe the core elements of the EMS and their interaction
To provide direction on where to obtain more detailed information on the operation of specific parts of the EMS
Clarification of Purpose:
Makes the EMS intelligible. Creates an EMS that is durable and robust: survives personnel changes, rapid growth, downsizing, time, etc. Provides objective basis for audit. Should result in agreement on how the EMS works. Ensures accountability. Creates the mechanism for capturing lessons learned – a way to hold the gains. Ensures analysis of process and an understanding that many processes and people have a role in the EMS.
Methods Specified by the ISO Clause:
Organization shall establish and maintain information in paper and electronic form to:
a. Describe the core elements of the EMS and their interaction
b. Provide direction to related documentation.

This Column to be Filled in by Facility	This Column for Verifier Notes
ELEMENTS: List elements of your EMS that achieve the same purpose as this ISO clause. Reference documentation.	
- The Kingsley Field EMS is documented by the numerous environmentally related documents listed in KFI 32-7001, Attachment 1 (Tab 2).	
IMPLEMENTATION: Describe the methods that are implemented to achieve the purpose of this clause.	
- Interpretation and implementation of all applicable EPA, ODEQ, DoD, AF, ANG, and local guidance. - Kingsley Field specific guidance is generated, reviewed, and updated to ensure applicability and currency with EMS goals and objectives.	
Assessment Codes: C = Comparable or In Conformance; S = Sufficiently Comparable (Minor non-conformances may exist); N = Not Comparable or Not In Conformance	*Verifier Assessment Code:*

4.4.4 Environmental management system documentation

VERIFICATION GUIDANCE

GEMS PERMIT EMS GUIDELINES

ALL GEMS PERMITS: The following elements should be present for both GEMS Achiever and GEMS Leader facilities:

- ☐ Written or electronic information that covers all clauses of the standard:
  - ☐ Describing the requirements of the management system and their interaction
  - ☐ Cross-referencing related documents

PURPOSE

Makes the EMS intelligible. Creates an EMS that is durable and robust: survives personnel changes, rapid growth, downsizing, time, etc. Provides objective basis for audit. Forces explicit agreement on how the EMS works. Ensures accountability. Creates the mechanism for capturing lessons learned – a way to hold the gains. Forces analysis of process and an understanding that many processes and people have a role in the EMS.

IMPACT OF ABSENCE

- Constantly re-inventing the wheel.
- Poor accountability. "I thought that was YOUR job!", or "I thought we did that every OTHER month!"
- Figuring out a better way to do things but there's no real way to implement the change. Everyone goes back to the old ways.
- Audits degenerate into "I don't think you're doing it right!", or "I don't like the way you do it!".

4.4.5 Document control

Purpose of ISO Clause (in ISO's Words):
To control documents required by the EMS.

Clarification of Purpose:
Creates a mechanism to change processes, ensures that everyone who needs to know does know, and provides a way to "hold the gains". Eliminates confusion about what is the current right way to do things. Provides a way for the appropriate people to control the process so that practice and results don't change spuriously.

Methods Specified by the ISO Clause:
Organization shall establish and maintain procedures for controlling all documents required by the Standard, to ensure that:

a. All documents can be located
b. All documents are periodically reviewed, revised as necessary and approved for adequacy by authorized personnel
c. The current versions of relevant documents are available at all locations where operations essential to the effective functioning of the EMS are performed
d. Obsolete documents are promptly removed from all points of issue and points of use, or otherwise assured against unintended use
e. Any obsolete documents retained for legal and/or knowledge preservation purposes are suitably identified.

Documentation shall be legible, dated (with dates of revision) and readily identifiable, maintained in an orderly manner and retained for a specified period.

Procedures and responsibilities shall be established and maintained concerning the creation and modification of the various types of document.

This Column to be Filled in by Facility	**This Column for Verifier Notes**
ELEMENTS: List elements of your EMS that achieve the same purpose as this ISO clause. Reference documentation.	
- EMO has established procedures in Section 9 of KFI 32-7001 that incorporate the requirements of Air Force Policy Directive (AFPD) 37-1, *Air Force Information Management*, for the maintenance of all documents related to the installation's EMS. - Included in these procedures is a requirement for annual reviews of all installation operating instructions (OI).	
IMPLEMENTATION: Describe the methods that are implemented to achieve the purpose of this clause.	
- The documents listed in Sections 4.3.3 and 4.3.4 of this permit are reviewed annually in accordance with the established procedures in KFI 32-7001. - Document control is further achieved through use of an EMO intranet site, as described in KFI 32-7001, to distribute relevant and applicable regulations, management plans, standardized operating procedures, and other environmentally related documents. - Organizational SEMs use the intranet site to provide their organization with the most current and up-to-date information and versions of documents.	
Assessment Codes: C = Comparable or In Conformance; S = Sufficiently Comparable (Minor non-conformances may exist); N = Not Comparable or Not In Conformance	*Verifier Assessment Code:*

4.4.5 Document control

VERIFICATION GUIDANCE

GEMS PERMIT EMS GUIDELINES

ALL GEMS PERMITS: The following elements should be present for both GEMS Achiever and GEMS Leader facilities:

- ☐ A document control procedure, such that documents:
  - ☐ Can be located
  - ☐ Are periodically reviewed, revised and approved
  - ☐ Have current versions available at essential locations, with no obsolete versions.
- ☐ EMS documents that are managed according to the procedures and are legible, identified, and dated.
- ☐ Obsolete version are retained for reference and are suitably identified.
- ☐ An assignment of responsibility for the creation and modification of documents.

PURPOSE

Creates a mechanism to change processes, ensures that everyone who needs to know does know, and provides a way to "hold the gains". Eliminates confusion about what is the current right way to do things. Provides a way for the appropriate people to control process so that practice, and therefor results, don't change spuriously.

IMPACT OF ABSENCE

- Confusion about "Do we STILL do it this way? I thought we changed it last week!", or "I have two procedures and don't know which one is right", or "This note on the wall has been changed 6 times. What the heck am I supposed to follow?"
- Documents become "dead".

4.4.6 Operational control

Purpose of ISO Clause (in ISO's Words):
To ensure that operations, activities, and goods and services used by the organization that are associated with the identified significant environmental aspects are controlled so that they:
a. Are carried out under specified conditions, and
b. Do not lead to deviations from the environmental policy and the objectives and targets.

Clarification of Purpose:
Provides operational consistency. Ensures that the "hands-on" processes that directly control environmental impacts and the achievement of environmental goals are appropriately controlled. Also ensures that the facility recognizes its position of authority in controlling "subcontractors" and exercise appropriate controls with them.

Methods Specified by the ISO Clause:
Organization shall identify those operations and activities that are associated with the identified significant environmental aspects in line with its policy, objectives and targets.
Organization shall plan these activities, including maintenance, in order to ensure that they are carried out under specified conditions.
Organization shall:
a. Establish and maintain documented procedures to cover situations where absence could lead to deviations from the environmental policy and objectives and targets.
b. Stipulate operating criteria in the procedures
c. Establish and maintain procedures related to the identifiable significant environmental aspects of goods and services used by the organization and communicate relevant procedures and requirements to suppliers and contractors.

This Column to be Filled in by Facility	This Column for Verifier Notes
ELEMENTS: List elements of your EMS that achieve the same purpose as this ISO clause. Reference documentation.	
- Virtually all operations at Kingsley Field are conducted in accordance with technical orders, manuals, or other type of operating instruction. Environmental impacts are tied back to operations via Hazardous Waste Profile Sheets, Industrial Hygiene Casefiles, Unit Environmental Folders, and DoD and Air Force forms listed in Section 10 of KFI 32-7001. - Plans, guides, checklists, and automated systems listed in Section 10 of KFI 32-7001 have been established to ensure operations are compliant with regulatory and procedural mandates. -	
IMPLEMENTATION: Describe the methods that are implemented to achieve the purpose of this clause.	
- Internal and external operational inspections ensure compliance with prescribed technical orders, manuals, and operating instructions, while annual environmental audits and compliance inspections check operational control against environmental regulatory and procedural mandates. - Adherence with purchasing requirements described in Section 4.3.1 of this application ensures supplier and contractor compliance with environmental targets and objectives.	

Assessment Codes: C = Comparable or In Conformance; S = Sufficiently Comparable (Minor non-conformances may exist); N = Not Comparable or Not In Conformance	*Verifier Assessment Code:*	

4.4.6 Operational control

VERIFICATION GUIDANCE

GEMS PERMIT EMS GUIDELINES

ALL GEMS PERMITS: The following elements should be present for both GEMS Achiever and GEMS Leader facilities:

- ☐ An identification of those operations and activities that are associated with its identified significant environmental aspects.
- ☐ Documented procedures that stipulate operating criteria and controls for identified operations in consideration of the need to prevent deviations from the environmental policy, objectives and targets.
- ☐ Procedures related to significant environmental aspects of goods and services it uses

GEMS LEADER PERMITS:

- ☐ Procedures to communicate procedures and requirements related to significant environmental aspects to relevant suppliers and contractors.
- ☐ Examples of communications with suppliers and contractors.

PURPOSE

Provides operational consistency. Ensures that the "hands-on" processes that directly control environmental impacts and the achievement of environmental goals are appropriately controlled. Also ensures that we recognize our position of authority in controlling "subcontractors" and exercise appropriate controls with them.

IMPACT OF ABSENCE

- See 4.4.5, above, but applied to working details rather than macro EMS processes. An unstable system.
- Differences in performance operator to operator, shift to shift, month to month.
- Inability to reliably meet performance goals because the processes and operations that impact performance are not identified and controlled.
- Changes in performance due to uncontrolled changes of materials or of supplier performance.

4.4.7 Emergency preparedness and response

Purpose of ISO Clause (in ISO's Words):
To identify potential for and respond to accidents and emergency situations.
To prevent and mitigate the environmental impacts that may be associated with them.
Clarification of Purpose:
Ensure that the operation is prepared for reasonably foreseeable emergencies, can prevent them wherever possible, can deal with these situations effectively, and mitigate the effects.
Methods Specified by the ISO Clause:
Organization shall:

a. Establish and maintain procedures to identify potential for and respond to accidents and emergency situations.
b. Establish and maintain procedures for preventing and mitigating the environmental impacts that may be associated.
c. Review and revise, where necessary, its emergency preparedness and response procedures, in particular, after the occurrence of accidents or emergency situations.
d. Periodically test such procedures where practicable.

This Column to be Filled in by Facility	This Column for Verifier Notes
ELEMENTS: List elements of your EMS that achieve the same purpose as this ISO clause. Reference documentation.	
- Kingsley Field has developed a Spill Preparedness and Response Plan, as well as other emergency response plans mandated by Air Force directives. These directives require compliance with all Federal and State emergency response planning requirements. - Actions related to environmental spills are contained in Section 11 of KFI 32-7001, which references and incorporates Operational Plan (OPLAN) 32-1, *173 FW Disaster Preparedness Operations Plan.* This plan is reviewed annually in accordance with procedures described in Section 4.4.5 of this permit application.	
IMPLEMENTATION: Describe the methods that are implemented to achieve the purpose of this clause.	
- EMO oversees Kingsley Field's Spill Preparedness and Response Plan and planning function. The spill team is manned and managed by Base Civil Engineering. Supplies for the team are provided by 173 FW/EM. - EMO is responsible for reporting spills and spill quantities to regulatory agencies. - Superfund Amendment and Reauthorization Act (SARA) Title III reporting requirements are handled and reported by EMO to the appropriate authorities. - Personnel with hazardous materials, hazardous waste, spill response or other related duties are provided spill and emergency response training. - All base employees are provided, at a minimum, basic-level emergency response training in their introductory safety briefing. - Emergency and disaster response procedures are practiced in accordance with OPLAN 32-1.	
Assessment Codes: C = Comparable or In Conformance; S = Sufficiently Comparable (Minor non-conformances may exist); N = Not Comparable or Not In Conformance	*Verifier Assessment Code:*

4.4.7 Emergency preparedness and response

VERIFICATION GUIDANCE

GEMS PERMIT EMS GUIDELINES

ALL GEMS PERMITS: The following elements should be present for both GEMS Achiever and GEMS Leader Permit facilities:

- ☐ A defined set of responsibilities, a management structure and a plan for emergency response to accidents and emergencies.
- ☐ Procedures to identify potential accidents and emergency situations.
- ☐ Procedures to respond to accidents and emergency situations.
- ☐ Procedures that address prevention and mitigation of environmental impacts associated with accidents and emergencies.
- ☐ A training program that includes specific provisions for skills in emergency preparedness for appropriate individuals.
- ☐ Procedures for periodic review and revision of emergency preparedness.
- ☐ If any accidents or emergencies have occurred, a review of procedures following the occurrence.
- ☐ Periodic drills or exercises to test the implementation of the procedures.

PURPOSE

Ensure that the operation is prepared for reasonably foreseeable emergencies, can deal with these situations effectively.

IMPACT OF ABSENCE

- Events that could or should be minor turn into major emergencies.

4.5.1 Monitoring and measurement

Purpose of ISO Clause (in ISO's Words):
To monitor and measure the key characteristics of operations and activities that can have a significant impact on the environment.
To track performance, relevant operational controls and conformance with the organization's environmental objectives and targets.
To periodically evaluate compliance with relevant environmental legislation and regulations.

Clarification of Purpose:
Ensures that performance measurement is based on sound metrics and that metrology processes are reliable and sound. Requires that commitments to stakeholders (such as permit conditions) are taken seriously and that the organization takes primary responsibility in monitoring their performance to meet the agreed conditions, rather than waiting for stakeholders to call. Also ensures that goals are real because the facility must establish consistent ways to demonstrate that it is meeting them or not.

Methods Specified by the ISO Clause:
Organization shall:

a. Establish and maintain documented procedures to monitor and measure, on a regular basis, the key characteristics of its operations and activities that can have a significant impact on the environment.
b. Track performance, relevant operational controls and conformance with the organization's environmental objectives and targets
c. Calibrate and maintain monitoring equipment, and retain records of this process according to the organization's procedures

Establish and maintain a documented procedure for periodically evaluating compliance with relevant environmental legislation and regulations.

This Column to be Filled in by Facility	**This Column for Verifier Notes**
ELEMENTS: List elements of your EMS that achieve the same purpose as this ISO clause. Reference documentation.	
- EMO has established specific metrics, identified in Section 12 of KFI 32-7001, that measure the installation's impacts on the environment and its progress toward achieving established objectives and targets. - EMO performs Industrial Shop audits to measure the shops' compliance with established requirements, goals, and targets.	
IMPLEMENTATION: Describe the methods that are implemented to achieve the purpose of this clause.	
- Permits, management plans, and standardized operating procedures outline specific monitoring and measurement of activities having environmental impacts. - Kingsley Field performs monitoring and measurement to include, but not limited to: lab analyses and reports of suspected and confirmed contamination of media (e.g., contaminated soil from a spill, wastewater discharged at wastewater outfall measuring point); monitoring of air pollution control equipment; reports of hazardous material purchases and use; reports of hazardous waste disposal; reports of hazardous waste reduction; energy use; calibration measurements of key equipment, and natural and cultural resource surveys. - EMO performs audits in accordance with Section 12.2 of KFI 32-7001. - Records are retained in accordance Section 9 of KFI 32-7001.	
Assessment Codes: C = Comparable or In Conformance; S = Sufficiently Comparable (Minor non-conformances may exist); N = Not Comparable or Not In Conformance	*Verifier Assessment Code:*

4.5.1 Monitoring and measurement

VERIFICATION GUIDANCE

GEMS PERMIT EMS GUIDELINES

ALL GEMS PERMITS: The following elements should be present for both GEMS Achiever and GEMS Leader Permit facilities:

- ☐ Documented procedures to monitor and measure on a regular basis key characteristics of operations and activities that can have a significant impact on the environment.
- ☐ Monitoring and measurement records that track performance, operational controls and conformance with the organization's objectives and targets.
- ☐ Performance measures that provide a clear and quantified measure of environmental performance in context with past performance.
- ☐ (OPTIONAL, BUT RECOMMENDED) Performance measures that provide a clear and quantified measure of environmental performance in context with similar facilities within the industry sector.
- ☐ Monitoring and measurement records that track operational controls
- ☐ Requirements and procedures to calibrate and maintain equipment designed to monitor and measure the key characteristics of its operations and activities that can have a significant impact on the environment.
- ☐ Records of this process.
- ☐ Documented procedures for periodically evaluating compliance with laws and regulations.
- ☐ Evidence of the evaluation of compliance.

PURPOSE

Ensures that performance measurement is based on sound metrics and that metrology processes are reliable and sound. Requires that commitments to stakeholders (like permit conditions) are taken seriously and that the organization takes primary responsibility in monitoring their performance to meet the agreed conditions, rather than waiting for downstream neighbors to call. Also ensures that goals are real because we must establish consistent ways to demonstrate that we are meeting them or not.

IMPACT OF ABSENCE

- EMS is disconnected from reality.
- "Seems to me that we got a lot better at recycling this year. Gee, must be maybe a 50% increase? Maybe even 60%!"
- "It's OK if that thermometer goes a little over the limit because it always reads a few degrees high."
- "I use my finger to measure temperature of process waste water."
- "We know when we exceed BOD limits because the guy next door complains."

4.5.2 Nonconformance and corrective and preventive action

Purpose of ISO Clause (in ISO's Words):
To handle and investigate nonconformance
To mitigate any impacts caused
To initiate and complete corrective and preventive action.

Clarification of Purpose:
To ensure that appropriate resources are applied to restore the EMS to a state of conformance, especially when a problem is recurring or resists standard methods. Corrective action fixes the problem while preventive action prevents it from recurring. Ensures that "fixed" problems stay fixed. Preventive action creates an EMS that is proactive rather than reactive.

Methods Specified by the ISO Clause:
Organization shall:

a. Establish and maintain procedures for defining responsibility and authority for handling and investigating nonconformance, taking action to mitigate any impacts caused and for initiating and completing corrective and preventive action
b. Implement and record any changes in the documented procedures resulting from corrective and preventive action.

Corrective and preventive action shall be appropriate to the magnitude of problems and commensurate with the environmental impact encountered.

This Column to be Filled in by Facility	This Column for Verifier Notes
ELEMENTS: List elements of your EMS that achieve the same purpose as this ISO clause. Reference documentation.	
- The primary mechanisms EMO uses for determining corrective and preventive actions are the annual industrial shop (environmental) and ECAMP audits.	
IMPLEMENTATION: Describe the methods that are implemented to achieve the purpose of this clause.	
- SEMs are encouraged to contact EMO program managers and the EMO ECAMP Manager to report environmental issues and request assistance. - The ECAMP program is conducted in accordance with AFI 32-7045, *Environmental Compliance Assessment and Management Program.* - Specific instructions for completing corrective actions resulting from annual industrial shop (environmental) and ECAMP audits, as well as changes to the EMS program, are contained in Section 13 of KFI 32-7001. - Corrective actions and EMS policy changes resulting for annual industrial shop and ECAMP audits are reviewed by the EPC.	
Assessment Codes: C = Comparable or In Conformance; S = Sufficiently Comparable (Minor non-conformances may exist); N = Not Comparable or Not In Conformance	*Verifier Assessment Code:*

4.5.2 Nonconformance and corrective and preventive action

VERIFICATION GUIDANCE

GEMS PERMIT EMS GUIDELINES

ALL GEMS PERMITS: The following elements should be present for both GEMS Achiever and GEMS Leader Permit facilities:

- ☐ Procedures and designation of responsibility for investigating and handling non-conformance from the EMS, including identification of the cause.
- ☐ Procedures for corrective and preventive action.
- ☐ A process to evaluate the environmental impact of a non-conformance and assess the appropriateness of the corrective and preventive actions.

PURPOSE

To ensure that appropriate resources are applied to restore the EMS to a state of conformance, especially when a problem is recurring or resists standard methods. Causes "fixed" problems to stay fixed. Preventive action creates an EMS that is proactive rather than constantly reactive.

IMPACT OF ABSENCE

- Repeated performance problems or recurring compliance violations.
- Problems that are hard to fix don't get fixed.
- An audit program with ineffective corrective action falls apart very quickly because of cynicism.

4.5.3 Records

Purpose of ISO Clause (in ISO's Words):
To demonstrate conformance to ISO 14001.
To support implementation and operation of the EMS.
To record the extent to which planned objectives and targets have been met.
Clarification of Purpose:
The EMS's memory. It allows the EMS to learn from the past. Proof that things happened as planned, or didn't. Fulfills certain regulatory requirements. Provides evidence for audits.
Methods Specified by the ISO Clause:
Organization shall establish and maintain procedures for identification, maintenance and disposition of environmental records, including records of training and audits and reviews.
Records shall be legible, identifiable and traceable to the activity, product or service involved.
Records shall be stored and maintained in such a way that they are readily retrievable and protected against damage, deterioration or loss.
Their retention time shall be established and recorded.
Records shall be maintained to demonstrate conformance to the requirements of the standard.

This Column to be Filled in by Facility	This Column for Verifier Notes
ELEMENTS: List elements of your EMS that achieve the same purpose as this ISO clause. Reference documentation.	
- EMO follows the Air Force Files Maintenance and Disposition System specified in AFI 37-122 *"Air Force Records Management Program,"* and AFI 37-138 *"Records Disposition—Procedures and Responsibilities"* for maintenance of records of policies and procedures related to its EMS.	
IMPLEMENTATION: Describe the methods that are implemented to achieve the purpose of this clause.	
- Certain records are maintained indefinitely due to possible future regulatory requirements. Records are maintained within EMO's filing system. - Hardcopies of such records may or may not be maintained at the individual program manager's desks as deemed most convenient or practical by the program manager. - Dispositions of records are outlined in the Files Management and Disposition Plan. - Other records are maintained by organizational SEMs. Examples of such records include inspection reports, training records, and other miscellaneous items. These records are maintained in accordance with policy established by the individual organization and EMO.	
Assessment Codes: C = Comparable or In Conformance; S = Sufficiently Comparable (Minor non-conformances may exist); N = Not Comparable or Not In Conformance	*Verifier Assessment Code:*

4.5.3 Records

VERIFICATION GUIDANCE

GEMS PERMIT EMS GUIDELINES

ALL GEMS PERMITS: The following elements should be present for both GEMS Achiever and GEMS Leader Permit facilities:

- ☐ Procedures to identify, maintain and dispose of environmental records.
- ☐ Legible and identifiable records for training, audits results and management reviews.
- ☐ Mechanisms for record storage and retrieval.

PURPOSE

The EMS's memory – allows EMS to learn from the past. Proof that things happened as planned, or didn't. Fulfills certain regulatory requirements. Provides evidence for audits.

IMPACT OF ABSENCE

- Inability to quickly locate records required by law, such as training records or waste manifests.
- "I don't remember if I closed that valve last week or not."
- "Who approved this shipment?"
- "How often do we really check the toxics vault?"
- "How much IPA have we bought this year?"
- "Have we told the supplier that we need low sulfur diesel fuel or not?"

4.5.4 Environmental management system audit

Purpose of ISO Clause (in ISO's Words):
To ensure that periodic environmental management system audits are carried out.
Clarification of Purpose:
Demonstrates management's commitment to have an EMS with integrity. Ensures congruence between documented procedure and actual practice. It is the main feedback mechanism to assure management and third party stakeholders that things are actually happening as planned. Helps EMS improve through constant and repeated review.
Methods Specified by the ISO Clause:
Organization shall establish and maintain procedures for periodic EMS audits to be carried out.

1. To determine if the EMS conforms to planned arrangements for environmental management, including ISO requirements
2. To determine whether it has been properly implemented and maintained
3. To provide information on the results of audits to management.

Audit program and schedule shall be based on the environmental importance of the activity concerned and the results of previous audits.
Audit procedures shall be comprehensive and cover the audit scope, frequency and methodologies, as well as the responsibilities and requirements for conducting audits and reporting results.

This Column to be Filled in by Facility	This Column for Verifier Notes
ELEMENTS: List elements of your EMS that achieve the same purpose as this ISO clause. Reference documentation.	
- Kingsley Field conducts internal environmental management system audits annually IAW guidance outlined in the ISO 14010 standard. EMS audits are conducted using the Air Force developed Environmental Management Self Assessment Tool (EMSAT) and a locally developed checklist (KFI 32-7001).	
IMPLEMENTATION: Describe the methods that are implemented to achieve the purpose of this clause.	
- Kingsley Field conducts internal management system audits annually in accordance with guidance outlined in the ISO 14010 standard and KFI 32-7001. - EMS findings are forwarded to the responsible organization's senior leadership as well as to the SEM, where applicable. A final audit report that consolidates all findings is produced annually and briefed to the EPC. Status of findings and associated corrective actions are tracked by the EMO and briefed at the quarterly EPC meetings along with the status of open ECAMP compliance findings. Follow-ups to audit findings will be conducted by the EMO.	
Assessment Codes: C = Comparable or In Conformance; S = Sufficiently Comparable (Minor non-conformances may exist); N = Not Comparable or Not In Conformance	*Verifier Assessment Code:*

4.5.4 Environmental management system audit

VERIFICATION GUIDANCE

GEMS PERMIT EMS GUIDELINES

ALL GEMS PERMITS: The following elements should be present for both GEMS Achiever and GEMS Leader Permit facilities:

- ☐ A program and procedure for periodic EMS auditing.
- ☐ Audit procedures that cover:
- ☐ Audit scope
- ☐ Frequency and schedule
- ☐ Methodologies
- ☐ Responsibilities for conducting and reporting results
- ☐ Audits of a scope sufficient to measure conformance with the requirements of the EMS.
- ☐ Provision of information to management regarding results of the audit.
- ☐ Audit procedures that are appropriate to the environmental importance of the activity.

SURVEILLANCE AUDIT GUIDELINES

An ISO 14001 registered facility is expected to receive an external surveillance audit on generally an annual basis by their registrar. The ISO Guidelines (ISO/IEC Guide 62, 1996) read: "The certification/registration body shall carry our periodic surveillance and reassessment at sufficiently close intervals to verify that its organizations whose EMS are certified/registered continue to comply with the certification/registration requirements. Note: In most cases it is unlikely that a period greater than one year for periodic surveillance would satisfy the requirements of this clause."

Surveillance audits should have an "external" element by one of the following:

1. Be performed by a qualified auditor who is independent from the company, and holds no conflict of interest relative to the company
2. Be performed by a qualified auditor who may be from within the company, but is independent of the organizational unit which is covered by the EMS
3. Be performed by an internal auditor, but such that audit reports and findings are provided to DEQ for review, who may at their option perform on-site verification.

The following surveillance procedures should be present for both GEMS Achiever and GEMS Leader facilities:

- ☐ A program for periodic surveillance audits that meets the above guidelines.
- ☐ Procedures for providing information to DEQ in the annual report regarding results of the audit(s) and associated corrective actions.

PURPOSE

Demonstrates management's commitment to have an EMS with integrity - "We insist on congruence between documented procedure and actual practice." The main feedback mechanism to assure management that things are actually happening as planned. Helps EMS improve through constant and repeated review.

IMPACT OF ABSENCE

- Documented "EMS" that is not implemented in practice.
- Practice that diverges from documented procedure over time.
- Cynicism because of knowledge that the documents are only for show.
- Documented procedure that reflects "best practice" but actual practice that doesn't.

4.6 Management review

Purpose of ISO Clause (in ISO's Words):

To ensure the EMSs continuing suitability, adequacy and effectiveness.

To ensure that the necessary information is collected to allow management to carry out this evaluation.

Clarification of Purpose:

Adjusts the EMS based on changes in business conditions, what works and what doesn't, internal audit findings, etc. Also is usually the mechanism for focusing management attention on environmental performance metrics and progress on environmental programs.

Methods Specified by the ISO Clause:

Organization's top management shall, at intervals that it determines, review the EMS to ensure the EMSs continuing suitability, adequacy and effectiveness.

The management review shall ensure that the necessary information is collected to allow management to carry out this evaluation.

The review shall be documented.

The review shall address the possible need for changes to policy, objectives and other elements of the EMS, in light of EMS audit results, changing circumstances and the commitment to continual improvement.

This Column to be Filled in by Facility	This Column for Verifier Notes
ELEMENTS: List elements of your EMS that achieve the same purpose as this ISO clause. Reference documentation.	
- Kingsley Field conducts internal environmental management system audits annually in accordance with guidance outlined in the ISO 14010 standard using the Air Force derived EMSAT program and a locally developed checklist (KFI 32-7001).	
IMPLEMENTATION: Describe the methods that are implemented to achieve the purpose of this clause.	
- To maintain continual improvement, suitability, and effectiveness of its environmental management system, Kingsley Field's senior management reviews and evaluates the overall environmental management system at quarterly EPC meetings. - Results of the installation-wide EMSAT audit and checklist results are reviewed by the EPC on an annual basis. - Items requiring particular management attention and action are discussed in detail and the results of this discussion, including identified follow-up actions, are included in the EPC minutes.	

Assessment Codes: C = Comparable or In Conformance; S = Sufficiently Comparable (Minor non-conformances may exist); N = Not Comparable or Not In Conformance	*Verifier Assessment Code:*	

4.6 Management review

VERIFICATION GUIDANCE

GEMS PERMIT EMS GUIDELINES

ALL GEMS PERMITS: The following elements should be present for both GEMS Achiever and GEMS Leader Permit facilities:

- ☐ A documented management review process that involved top management.
- ☐ Designated intervals for management review.
- ☐ Documentation of reviews that have occurred.
- ☐ Evidence that changes to policy, objectives and other EMS elements were addressed in light of audit results and/or changing circumstances.

PURPOSE

Adjusts the EMS based on changes in business conditions, what works and what doesn't, internal audit findings, etc. Also is usually the mechanism for focusing management attention on environmental performance metrics and progress on environmental programs.

IMPACT OF ABSENCE

- An EMS that is disconnected from senior management and from the realities of the business.
- Lack of accountability for achieving goals and completing corrective actions.

ACRONYMS

ACS	Air Control Squadron
ADF	Air Defense Fighter
AFI	Air Force Instruction
AFPD	Air Force Policy Directive
AGE	Aerospace Ground Equipment
AICUZ	Air Installation Compatible Zone
ANG	Air National Guard
ANGRC	Air National Guard Readiness Center
ATC	Air Traffic Control
ATCS	Air Traffic Control Squadron
ATS	Automated Test Shop
CES	Civil Engineer Squadron
CFR	Code of Federal Regulations
CNG	Compressed Natural Gas
CWA	Clean Water Act
CY	Calendar Year
DEQ	Department of Environmental Quality
DoD	Department of Defense
EA	Environmental Assessment
ECAMP	Environmental Compliance Assessment and Management Program
EIAP	Environmental Impact Analysis Process
EMO	Environmental Management Office
EMS	Environmental Management System
EMSAT	Environmental Management Self Assessment Tool
EO	Executive Order
EPC	Environmental Protection Committee
FAA	Federal Aviation Administration
FITS	Fighter Interceptor Training Squadron
FW	Fighter Wing
GEMS	Green Environmental Management System
HAZMART	Hazardous Materials Pharmacy
HazMat	Hazardous Materials
HMMPT	Hazardous Materials Management Program Team
IAW	In Accordance With
IRP	Installation Restoration Program
KFI	Kingsley Field Instruction
KFPD	Kingsley Field Policy Directive
MAJCOM	Major Command
NDI	Non-destructive Inspection
NEPA	National Environmental Policy Act
NPDES	National Pollutant Discharge Elimination System
OAR	Oregon Administrative Rules
OI	Operating Instruction
OPLAN	Operational Plan
ORS	Oregon Revised Statutes
OSHA	Occupational Safety and Health Administration
PAI	Primary Aircraft Inventory
PCB	polychlorinated biphenyl
PMEL	Precision Measurement Equipment Laboratory
POL	Petroleum, Oil, and Lubricants
R & R	Repair & Reclamation
RAPCON	Radar Approach Control
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendment and Reauthorization Act
SEM	Shop Environmental Manager
TEAM	The Environmental Assessment and Management (TEAM) Guide
TFTS	Tactical Fighter Training Squadron
TMO	Traffic Management Office
T.O.	Technical Order
VOC	Volatile Organic Compound
USAF	U.S. Air Force
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency