

Fairchild Air Force Base

Weapon System Acquisition Team

Fairchild Air Force Base's Environmental Management (EM) Subcommittee has achieved substantial accomplishments in the area of green procurement and pollution prevention acquisition. The team has ensured that every acquisition on the base considers a wide variety of environmental, safety, and occupational health elements.

Fairchild provides a shining example of how base-level efforts can significantly improve the overall weapon system acquisition program. In the past two years the EM subcommittee has helped the installation achieve a number of significant accomplishments:

SIGNIFICANT ACCOMPLISHMENTS

- **A fully implemented Green Procurement Program (GPP)** that ensures all federally mandated items are included in all types of acquisitions including almost \$400,000 worth of commodities through the base supply store alone.
- **A hazardous material management program** that ensures hazardous materials used on the base receive environmental, safety, and occupational health oversight and are reviewed for possible environmentally friendly substitutes.
- **A fully compliant Environmental Management System (EMS)** that is committed to sustaining its already successful pollution prevention program, with a particular focus on environmental conscience acquisition.
- **Evaluation and acquisition of equipment** that has resulted in an over 20,000 pound annual reduction in hazardous waste.
- **Received the Governor's Award for Pollution Prevention** three times for outstanding efforts in hazardous waste, hazardous material, and solid waste reductions.
- **Wrote a new Green Procurement Program (GPP) Plan** utilizing in-house base personnel and AF guidance to provide direction for incorporating green procurement in all forms of acquisition.



BACKGROUND

Located in northeastern Washington, Fairchild Air Force Base (AFB) is home to thirty four KC-135 Stratotanker aircraft with the principal mission of air refueling. This unique asset greatly enhances the Air Force's capability to accomplish its primary missions of Global Reach and Global Power. It also provides aerial refueling support to Air Force, Navy and Marine Corps aircraft as well as aircraft of allied nations.

From the top down, Fairchild's environmental programs are a base priority and as stated by the Wing Vice Commander, it is Fairchild's environmental policy to "investigate and evaluate new and innovative technologies and practices as appropriate, [and] establish and implement an effective pollution prevention program..." Building on this, Fairchild AFB has become a leader in pollution prevention and "green" acquisition and the base Environmental Management (EM) Subcommittee members are the key advocates of these programs. Led by Lieutenant Colonel John Foden, Mission Support Group Deputy Commander, and Lieutenant Colonel Paul Wood, Maintenance Group Deputy Commander, and supported by base Environmental Flight, the subcommittee members include Unit Environmental Coordinators (UEC) from all squadrons and associate units.

The UECs act as the Cross Functional Team (CFT) for the base Environmental Management System (EMS) program and report directly to the Environmental, Safety, and Occupational Health Council (ESOH), which is chaired by the Wing Vice Commander. This strong representation from organizations throughout the base has been instrumental in incorporating environmental considerations in all forms of acquisition.

AWARDS

Fairchild has garnered numerous awards from Air Mobility Command (AMC), and/or the Air Force (AF) every year for a broad range of environmental programs including pollution prevention, environmental quality, natural/cultural resources, recycling, energy conservation and most recently the AMC 2006 Award for Pollution Prevention and the AMC and AF 2007 Awards for Pollution Prevention Acquisition.

Fairchild's reputation for constantly improving their environmental programs is evidenced by the base receiving an unprecedented three Washington State Governor's Awards for Pollution Prevention and Sustainable Practices. The Governor's award team stated that they see Fairchild "as the leader in the way employees examine their problems, create bold solutions and achieve results in excess of those they expect or that others achieve. They are consistently among the leaders in innovation and results."



ACCOMPLISHMENTS

In the past two years, Fairchild has implemented important changes to meet the challenges of establishing an Environmental Management System. Several environmental subcommittees that were previously needed to implement the diverse and complex environmental requirements, were streamlined into one subcommittee - the EM Subcommittee.

The members of the EM subcommittee have been tasked with sustaining the sound environmental programs that the base has established, while evolving to the new concept of EMS and the identification of new environmental priorities. A benefit of this transition was the ability of the base to make significant positive strides in the implementation of green procurement and pollution prevention acquisition.



Fairchild AFB is the biggest user of biodiesel in the region. A Fairchild team participated in a local coalition to address the logistics and details of bringing B20 (80% diesel and 20% biodiesel) to the region. The base now dispenses about 50,000 gallons of B20 annually.

POLLUTION PREVENTION ACQUISITION PROGRAM

As a small industrial base, Fairchild has accomplished substantial success in the area of pollution prevention acquisition. The base has been a leader within the Air Force, demonstrating how each base can develop and implement base-level programs that contribute to the overall Air Force weapon system acquisition program. The integration of Environmental, Safety, and Occupational Health (ESOH) in every type of acquisition on the base has taken persistent and continuous effort by members of the EM Subcommittee. This persistence is now paying off as evidenced by the way every person at Fairchild accepts their role in meeting program goals as part of his or her mission.

In 2006, Fairchild stepped up within AMC and expanded the base Affirmative Procurement Plan to include all aspects of green procurement. Utilizing base personnel and AF guidance to write the new Green Procurement Program (GPP) Plan in-house, the plan now provides the foundation for incorporating green procurement in all forms of acquisition. Green purchasing is considered in all construction contracts, service contracts and commodity purchases, including acquisitions that support the base weapon system. Fairchild has shared their plan with other AMC and AF bases as they pursue development of "green" programs.

Fairchild has partnered with the Washington Military Sustainability Partnership (WMSP) which is sponsored by the Joint Regional Flag Officer Council. This partnership is the first in the nation to establish a formal intrastate network of resources. The goal of the WMSP is to demonstrate leadership in developing sustainable military operations that manage

resources in ways that go beyond solving today's problems, to laying a foundation that balances mission, well being, and the environment. The members of WMSP have joined together to identify common issues and where appropriate, work in a collaborative effort to address these issues.



Personnel from the Environmental Flight and Contracting Squadron have worked closely together to develop a Green Procurement Program (GPP) Plan and ensure associated requirements are included in all acquisitions. The GPP plan was written in-house and covers all federally mandated program elements. The plan provides the foundation for the base GPP program.

Incorporating Environment, Safety, and Occupational Health Analysis in Acquisition

Representatives from the base Environmental, Safety, and Occupational Health offices are an integral part of the design and development of projects, services, and materials acquired at Fairchild. These same offices are an integral part of the EM Subcommittee and the ESOHC, and have a genuine interest and understanding of how ESOH must be considered and incorporated in all acquisitions. Working closely with Contracting Office personnel to ensure compliance with DOD Directive 5000.1,

representatives from these offices attend design, multi-functional team, pre-performance, and preconstruction meetings as needed, to ensure ESOH is being considered in all acquisitions.



Fairchild AFB recycles a wide variety of materials including used oil and antifreeze. On the flip side, the base purchased and used about 2,100 gallons of re-refined oil and 550 gallons of reclaimed antifreeze in the last two years. In addition, the base uses over 50,000 gallons of biodiesel annually.

An updated and detailed environmental specification was recently incorporated into the base design standards to ensure all environmental requirements are being met on construction projects. These specifications ensure that green procurement is being incorporated in construction and encourages more environmentally preferable product substitutions when available. Similar language is being incorporated in all service contracts. The result - thousands of pounds of recycled products have been used in several renovation and construction contracts.

Materials such as insulation, concrete, tile, reinforcing steel, and roofing materials have been used on the base. Even the new base 3/4 mile running path is composed of 100% recycled rubber granules!

Fairchild was the first base in AMC to award new Multiple Award Task Order Contracts (MATOC). As a proactive step, the MATOC contractors have developed concise, but detailed green procurement program procedures to ensure that GPP is incorporated into all applicable task orders. As a "catch-all", an innovative procedure has been implemented for all funding documents consisting of an automated drop down menu which requires the requester to complete a GPP review and sign-off on a GPP statement - in other words, customers certify green procurement was considered in all acquisitions.

Environment, Safety and Occupational Health Integration

Pollution Prevention concepts are integrated throughout the base in every shop, office and living space. As an additional duty, the UECs are responsible for implementing all aspects of the environmental management program within their organizations. The Environmental Flight has developed several plans in-house, which provide the guidance and requirements associated with the various environmental programs. These plans are updated annually, incorporating input from UECs and the Safety and Bioenvironmental offices.

The operation and maintenance of the KC-135's and support equipment receives constant vigilance from the Environmental, Safety and Bioenvironmental offices. The three offices work closely together to support the common goal of being protective of personnel and the environment. This base wide vigilance was validated by receiving the best results ever within



The Base Supply Store stocks a large variety of items made from recovered materials. Special recycling tags on the shelves make it easy for customers to "buy-recycled". In two years, approximately \$390,000 of EPA-compliant supplies was purchased by Fairchild personnel at the store.

our major command, in their inspection of our environment and occupational health programs by AMC headquarters in June 2007!

In 2006, samples of floor sweeper wastewater from Fairchild's four-hangar aircraft maintenance facility revealed that a large quantity of the wastewater generated was hazardous under the Washington State Hazardous Waste Regulation and/or exceeded sanitary sewer discharge pretreatment standards established by the Spokane Regional Wastewater Treatment Facility for various metals. As a result, hazardous waste generated by the base increased by over 27,000 pounds annually. Key members of the EM subcommittee (Maintenance Squadron UEC, Bioenvironmental, Safety, and Environmental offices) initiated a study to determine and evaluate alternatives to the cleaning operations and the aircraft maintenance operations. The team evaluated options that could reduce

environmental impacts as well as occupational health risks. As a result, the Maintenance Squadron UEC was able to justify the purchase of a new wet/dry floor sweeper. This new unit does a great job cleaning the floor with a dry sweep method, requiring only an occasional wet cleaning method which uses a foam product rather than large quantities of water.

The result, a reduction in the amount of hazardous waste generated by about 99% (5 pounds of dry waste generated per use versus 1,400 pounds of wastewater), less exposure to personnel since they no longer have to handle large quantities of sweeper wastewater, and a facility that can be easily maintained in support of the aircraft maintenance mission. An estimated savings of \$9,000 per year are funds that can be used to support other mission essential operations.



A recently purchase wet/dry floor sweeper is a big improvement over the older wet floor sweeper. Using a dry method for most floor cleaning operations with occasional wet "foam" cleaning, significantly less wastewater is now generated. The base estimates that this new unit will result in a 20,000 pound annual reduction in hazardous waste disposal.

Material Substitution/Hazardous Material Elimination Or Minimization

One potential safety, health, and environmental risk associated with the maintenance of the assigned weapon system comes from the hazardous materials that must be used by shop personnel. To ensure all environmental, safety, and occupational health protection measures are being considered, no hazardous material can be purchased and used on the base until the ESOH team thoroughly evaluates the product. The team identifies personal protection, storage, and handling requirements associated with each product. Not until the analysis and recommendations are provided to the customer, can the product be acquired for use.

A more stringent review and approval procedure has been successfully implemented by Fairchild for products containing the Environmental Protection Agency Toxic 17 Chemicals. Any organization planning to use a product containing a Toxic 17 must ensure that there is no viable option or alternative that is more environmentally friendly. The Maintenance Group Deputy Commander must then formally approve the Toxic 17 chemical product before it can be purchased and used. This procedure has resulted in an over **90% reduction in Toxic 17 chemical usage**.

The EM Subcommittee realizes that a benefit of reducing hazardous material use and/or using more environmentally preferable products is the associated reduction in hazardous waste generation and in turn reduced liabilities and risks. A paint mixing station in Vehicle Maintenance has reduced paint usage and waste. The mixing station allows the exact amount of paint to be mixed for quantities as small as two ounces, which significantly reduces paint waste and has resulted in a \$5,000 annual savings. AMC was

so impressed with this initiative during their recent inspection of Fairchild's environmental and occupational health programs, that they included it in an information sharing database for all other bases for adoption.

New solvent recycling parts washers were purchased about a year ago and no hazardous waste has been generated from the units since start-up. In addition, the base has reduced solvent purchases by over one ton per year. The net result is an estimated cost savings of \$10,000 per year with the acquisition of the new parts washers.

The messy job of repairing fuel cells and tanks has also been improved with the purchase of a sealvac bowser unit. Jet fuel must be removed prior to the inspection and repair of the fuel cells and tanks. The new unit used to empty the tanks includes a special adapter plate which essentially eliminates any JP-8 fuel spills during the draining process. No fuel spills equate to more recovered fuel, fewer spill pads, and less hazardous waste. Preventing spills also eliminates the associated health exposure and unlike the old method of fuel removal, there is no "free fall" associated with this new unit, which eliminates the safety risks associated with static electricity build-up.



Teamwork thrives at Fairchild, especially when it comes to solving challenging issues. Historically, \$50,000 a year was spent on an emulsifier to control erosion of the "bunkers" in the base munitions storage area. This oil-based product was costly and time consuming to apply. A team looked at alternatives and determined that planting native, low growth vegetation would eliminate the need for the emulsifier and also require minimal maintenance. After working with a local seed company, the base planted seed on the bunkers and have successfully controlled erosion with minimal maintenance, saving over \$50,000 annually.



The new "sealvac" bowser unit is used to empty fuel cells and tanks prior to inspection and repair. The unit uses a special adapter plate which essentially eliminates JP-8 fuel spills. Reduced health exposure and reduced safety risks have also been realized.

Fairchild is always looking for more environmentally preferable products. The base is a leader in our region, being the first to use biodiesel. Over 150,000 gallons have been dispensed through the military gas station and the Fuels Management Flight has developed a proactive plan to bring biodiesel to the flightline.

In the past two years the base vehicle maintenance shop has utilized 50 recapped tires, 2,100 gallons re-refined oil and 550 gallons of reclaimed antifreeze. The base supply store clearly labels all GPP compliant products, making it easy for customers to make "the right" choice. In two years \$390,000 worth of recycled products were purchased through the base supply store! In addition to the over 1500 tons of municipal solid waste diverted through the base recycling program, the base also recycled 7,500 gallons of antifreeze, 25,000 gallons of oil/fuel, 52 tons of tires and 5,000 gallons per year of deicer.

The Auto Hobby Service Center also recycles over 700 tires each year which are re-used for retreads, fuel, and "enviro-blocks". An astounding 600,000 cubic yards of soil recovered from demolition of a warehouse foundation was reused on base for backfill during the removal of underground tanks, building berms for sound and visual barriers, and top soil prior to planting vegetation.

"Fairchild leads the charge through its buy recycled program."

EDUCATION AND OUTREACH

Training and awareness is the key to any successful environmental program and Fairchild has seized every opportunity and media source to promote pollution prevention and green procurement. Utilizing all media venues including plans, newspaper articles, brochures, briefings, subcommittees, base TV channel, computer based training and informational booths; every base employee has been touched by the environmental message. Pollution prevention acquisition is emphasized through a variety of venues. Training has been provided through the EM Subcommittee.

Over 30 Contracting Squadron personnel have been trained on GPP ensuring legal requirements are incorporated, implemented and verified in all new contracts and purchases. Fairchild's contracting office was the first in AMC to mandate GPP evaluations as part of the initial acquisition strategy for all major construction and service contract requirements.



Fairchild has participated in local community events in a variety of ways. An informational booth is used to share the environmental message. Venues such as America Recycles Day events and state recycling conferences are a great way to get the word out to community members.

One-on-one training with design engineers and construction managers is paying off. Not only do these key team members understand the requirements associated with green acquisition, they also understand why the program is so important. Monthly training is provided to all new government purchase card (GPC) holders. Resource managers, authorizing officials, Quality Assurance Personnel and GPC holders receive periodic green procurement updates through newsletters and e-mail.

Sharing the environmental message with the local communities is also an important part of the base outreach program. The base hosts a vendor's fair where approximately 40 small businesses from the northwest region attend and are encouraged to showcase any recycled or "green" products and services they may provide. In return, the base takes the opportunity to explain the federal green procurement program to the vendors, along with the 1000+ base personnel that attend the fair.

The base has also participated in the Washington State Recycling Association annual conference by setting up an informational booth about GPP. Approximately 125,000 people were reached at the base two-day Air Show where a wide variety of buy recycled educational material was distributed.



A record 125,000 people came to Fairchild for the two-day "Skyfest" air show. An environmental informational booth was set up for the air show. A wide variety of recycled/buy recycled educational material was distributed to an enthusiastic crowd.

CONCLUSION

Fairchild is proud of the phenomenal accomplishments we have made in our environmental programs. We have made significant achievements in pollution prevention acquisition by developing a sound Green Procurement Program, seeking ways to reduce our hazardous material use, acquiring equipment that reduces our waste generation, and reaching out to every person on the base with the environmental message.

With the support of strong leadership and the resourceful and hard-working members of the Environmental Management Subcommittee, Fairchild will continue to seek ways to improve and build on these achievements and continue to ask Team Fairchild to "Catch the Environmental Spirit!"

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SECRETARY OF DEFENSE
ENVIRONMENTAL AWARDS



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