

FY 2011 Secretary of Defense ENVIRONMENTAL AWARDS

Environmental Management System Cross Functional Team / Environmental Excellence in Weapon System Acquisition - Team

BACKGROUND

Located on over 4,300 acres in northeastern Washington, Fairchild Air Force Base (AFB) is responsible for providing aerial refueling, as well as rapid and reliable passenger and cargo airlift and aero-medical evacuations. The base is home to the 92d Air Refueling Wing and multiple associate units including the 141st Air Refueling Wing (Washington Air National Guard) and the 336th Training Group (Air Force Survival, Evasion, Resistance, and Escape (SERE) School). The 92d and 141st operate and maintain thirty five KC-135 Stratotanker aircraft with the principal mission of air refueling. Another major tenant organization is the Armed Forces Reserve Center which opened in 2010 and is comprised of approximately 850 Army Guard and Reserve personnel assigned to 18 units with various missions. The largest employer in Eastern Washington State, Team Fairchild encompasses more than 5,100 active-duty military, members of the Air National Guard, tenant unit members, and civilian employees.

POSITION DESCRIPTION

Fairchild AFB's mission is to Provide aerial refueling and airlift service. From senior leadership to the shop level, Fairchild's environmental programs are a top priority. 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 System (EMS) Cross Functional Team (CFT) members are at the front of these programs. Led by Lieutenant Colonel Stacy Clements, Mission Support Group Deputy Commander, and Lieutenant Colonel Alan Hart, Maintenance Group Deputy Commander, the CFT is comprised of Unit Environmental Coordinators (UEC) from all squadrons and associate units with support provided by the base Environmental office. Twenty seven base organizations are actively represented by their designated UEC(s). Every UEC is a seasoned employee familiar with their unit's mission and operations. Their operational knowledge is a huge asset as they work toward integrating environmental considerations into all unit processes. The UECs are members of the base Environmental Management Subcommittee, which reports directly to the Environmental, Safety, and Occupational Health Council (ESOHC), 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 Air Force and Air Mobility Command (AMC) awards for a broad range of environmental programs including pollution prevention, environmental quality, natural and cultural resources, recycling, energy conservation and pollution prevention acquisition. In 2008 Fairchild received the Secretary of Defense Award for Environmental Excellence in Weapon System Acquisition and is proud to be nominated by the Air Force for the award again this year.

ACCOMPLISHMENTS

Fairchild has a well-established EMS. The CFT has taken the lead in sustaining the sound environmental programs that have been long established at Fairchild, while using the EMS to establish environmental priorities. The implementation and growth of the base green procurement and pollution prevention acquisition program is one of the significant aspects established as an environmental priority. A comprehensive EMS Environmental Management Plan (EMP) for the Pollution Prevention Program established objectives and targets for improving both the Green Procurement Program (GPP) and Hazardous Material Management Process (HMMP) program. The CFT members have contributed greatly to the positive strides made in these environmental programs over the past two years.

POLLUTION PREVENTION ACQUISITION PROGRAM

Fairchild has been successful in the area of pollution prevention acquisition. Fairchild has been a leader within the Air Force, demonstrating how each base can develop and implement base-level programs that contribute to the overall AF weapon system acquisition program.

The integration of Environmental, Safety, and Occupational Health (ESOH) in every type of acquisition has taken persistent and continuous effort by members of CFT. This persistence has paid off as evidenced by the way every person at Fairchild accepts their role in meeting program goals as part of his or her mission.

Fairchild's GPP Plan provides the foundation for incorporating green procurement into 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. All levels of the procurement process, from the designers and contract personnel to engineers and construction managers, contribute to the GPP.

INCORPORATING ENVIRONMENT, SAFETY, AND OCCUPATIONAL HEALTH ANALYSIS INTO SYSTEMS ENGINEERING

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 CFT 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.

A detailed environmental specification is 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 incorporated in all service contracts. The result - thousands of pounds of recycled products have been incorporated in several construction contracts. Materials such as insulation, concrete, tile, reinforcing steel, and roofing materials have been used on the base.

ENVIRONMENT, SAFETY AND OCCUPATIONAL HEALTH RISK MANAGEMENT

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 Office 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 receive 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 during an inspection of our environmental and occupational health programs by AMC headquarters in October 2010. The inspection team was very impressed with the overall awareness of the base's environmental policy and EMS program.



The Base Supply Store stocks a large variety of items made from recovered materials and bio-based products. Special recycling tags on the shelves make it easy for customers to "buy-recycled". In two years, over \$375,000 of EPA-compliant supplies was purchased by Fairchild personnel at the store.

In 2006, samples of floor sweeper wastewater of several industrial areas 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 30,000 pounds annually. Key members of the CFT (Maintenance Squadron, Bioenvironmental, Safety, and Environmental offices) worked quickly to significantly reduce this hazardous waste stream by 25,500 pounds. But the CFT team continued to look for ways to further reduce this waste stream. The base Hydraulics Shop has many responsibilities, including aircraft brake maintenance. The shop disassembles the aircraft wheels which include the “depucking” or removal of the brake pads before they are sent to the Wheel and Tire shop for additional maintenance. Historically, the brake pads contained cadmium and other heavy metals. The teardown of the brake assemblies and “depucking” process created toxic dust. As a result, floor cleaning wastewater from the shop tested positive for cadmium. It was assumed the cadmium was generated from the “depucking” process. Over an approximate three year period, a conversion to cadmium-free brake pads was conducted and completed in 2010. In 2011, after the conversion, floor cleaning wastewater tested negative. The switch to cadmium-free brakes resulted in less exposure of personnel to a health hazard, a hazardous waste reduction of an additional 3,000 pounds annually and an estimated cost savings of \$1,400 per year which can now be used for other mission essential operations.

HAZARDOUS MATERIAL MANAGEMENT AND POLLUTION PREVENTION

Potential safety, health, and environmental risks associated with the maintenance and sustainment of assigned weapon system are often associated with the use of hazardous materials 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.

In 2010 Fairchild implemented a new web-based hazardous material tracking system called the Enterprise Environmental Safety and Occupational Health – Management Information System (EESOH-MIS). Thorough preparation before implementation to the new database resulted in a smooth and painless transition for all database users, including many members of the CFT. Multiple training classes offered by Environmental Office personnel ensured that there was no mission impact due to this significant change in hazardous material tracking. Fairchild also requires barcoding of all hazardous material items. EESOH-MIS generated barcodes are placed on all hazardous material items, which track the items from the time it is placed in inventory, issued to the user, used, and finally returned to a central location for proper disposal. This true cradle-to-grave tracking helps the base control and minimize the amount of hazardous materials being purchased, stored and used in shops. A big 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 to human health.

Teamwork and cooperation contributed greatly to the smooth transition when the two refueling wings on base, the 92d Air Refueling Wing and the 141st Air National Guard Refueling Wing, combined as part of Total Force Integration (TFI). Members of the CFT worked closely together to integrate hazardous material use when all industrial shops combined, eliminating duplications of materials and hundreds of hazardous material authorizations. By sharing ideas and operating procedures, the combining shops were able to develop best management and business practices which benefited multiple environmental programs.



Floor sweeper wastewater was one of the largest hazardous waste streams on the base, but several processes have been changed to greatly reduce this waste stream, including the more recent conversion to cadmium-free brake pads. Maintenance of the brake pads no longer creates cadmium-containing dust that historically had contaminated floor cleaning wastewater. The switch to cadmium-free brakes resulted in less exposure of personnel to a health hazard, hazardous waste reduction of an additional 3,000 pounds annually and an estimated cost savings of \$1,400 per year.



Fairchild fully implemented the new Air Force web-based hazardous material database tracking system in 2010. The base uses the database to barcode all hazardous materials and ensure true cradle-to-grave tracking. Improved HAZMAT management results in reduction in hazardous waste generation and the associated liabilities and risks to human health.

In 2010/2011 Fairchild completed a major reconstruction of the runway. This \$44 million dollar project presented an amazing opportunity to salvage, recycle, and reuse hundreds of millions of pounds of material. The first priority was to reuse as much material on base. Existing asphalt was recycled by mixing and grinding the asphalt into the existing base course and adding cement and water to build the new cement-treated base course under the runway. Other recycled asphalt was used as fill material under the new runway and on the overruns at the end of the runway. Existing concrete from the old runway was crushed and used as fill material for the shoulders of the new runway. Material that could not be reused on base was sent off base for reuse. Because the runway project also included new lighting, thousands of pounds of scrap metal was generated from the rebar in the existing lighting foundations. In total, 90,000 tons of concrete, 106,000 tons of asphalt, and 125 tons of metal were salvaged, recycled, or reused. The icing on the cake was the \$12 million dollars of new concrete used on the runway, which contained recycled fly ash as a component.

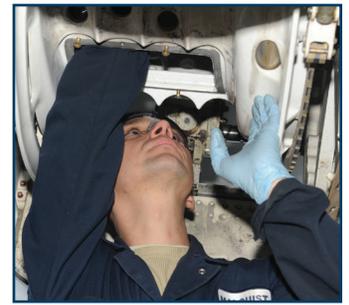
Another significant stride in pollution prevention acquisition at Fairchild over the past two years involves energy and water conservation efforts. For many years the base has dispensed approximately 50,000 gallons of biodiesel every year at the base military gas station. More recently, an E-85 tank was installed, dispensing about 20,000 gallons of E-85 annually. Utilizing these domestic fuels allows us to reduce our dependency on foreign sources of fuel. A major re-lamping project in a eleven acre hangar complex was completed in 2010. This lighting upgrade saved over \$115,000 in the first year and improved lighting levels by 50%. Water conservation is also a priority at Fairchild. A recent investment in a “Smart Irrigation” system will allow the base to strategically irrigate 166 acres of improved grounds with a payback of eight years and an estimated savings of 72.3 million gallons of water every year.

EXTERNAL COORDINATION

Key members of the CFT work closely with federal, state, and local regulators. In 2011, the Washington Department of Ecology reviewed and recognized the base EMS and stated that with the EMS “Fairchild AFB should be able to accurately document and measure its environmental performance and gather the pertinent data to accurately gauge its environmental performance”. The Department also agreed to accept the EMS in lieu of the state required Pollution Prevention Plan.

The Department of Ecology also turned to Fairchild for assistance in developing their new computer-based pollution prevention reporting program. As a long-time leader in pollution prevention, Fairchild was one of four organizations in the state of Washington to test and provide input on the functionality of the new software. Organizations and industries across the state will benefit from this effort.

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. Fairchild has fully embraced the new Air Force eDASH website as the “go to” information source for all Fairchild environmental programs. CFT members receive green procurement training during their required initial training, with refresher awareness provided routinely at the Environmental Management Subcommittee meetings. All Contracting Squadron personnel have been trained on green procurement ensuring legal requirements are incorporated, implemented and enforced in all new contracts and purchases. One-on-one training with design engineers and construction managers is paying off. These key team members understand the requirements associated with green acquisition and understand why the program is so important. Monthly training is provided to all new government purchase card (GPC) holders. Resource managers, authorizing officials, and Quality Assurance Personnel also receive training.



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The ESOH message reaches thousands of Fairchild team members and their families through the base Safety Day, Earth Day/Arbor Day celebrations, ESOH Council meetings, and newcomer's briefings. The Environmental and Safety offices assess and inspect every facility across the base including industrial workplaces, associate units, offices, and services facilities. Approximately 125 locations are visited at least annually, with major industrial facilities visited monthly. Through plans, newspaper articles, brochures, briefings, subcommittees, the base TV channel, computer-based training and informational booths; every base employee has been touched by the environmental, safety, and occupational health message.



Kids from the base elementary school learn about the importance of the environment during Arbor Day celebrations. The ESOH message reaches thousands of Fairchild team members and their families through many forms of media and venues. Through plans, newspaper articles, brochures, briefings, the base TV channel, computer-based training, informational booths at Safety Day, Earth Day and Air Show celebrations, ESOH Council meetings, and newcomer's briefings; every base employee has been touched by the environmental, safety, and occupational health message.